MARCH '59

MODERN TEXTILES MAGAZINE

Specializing in Man-Made Fibers and Blends since 1925

FIBERS

FABRICS

FINISHES

The new president of ACMI is JAMES CHAPMAN of Inman and Riverdale Mills — story page 22

THIS MONTH'S LEADING ARTICLES:

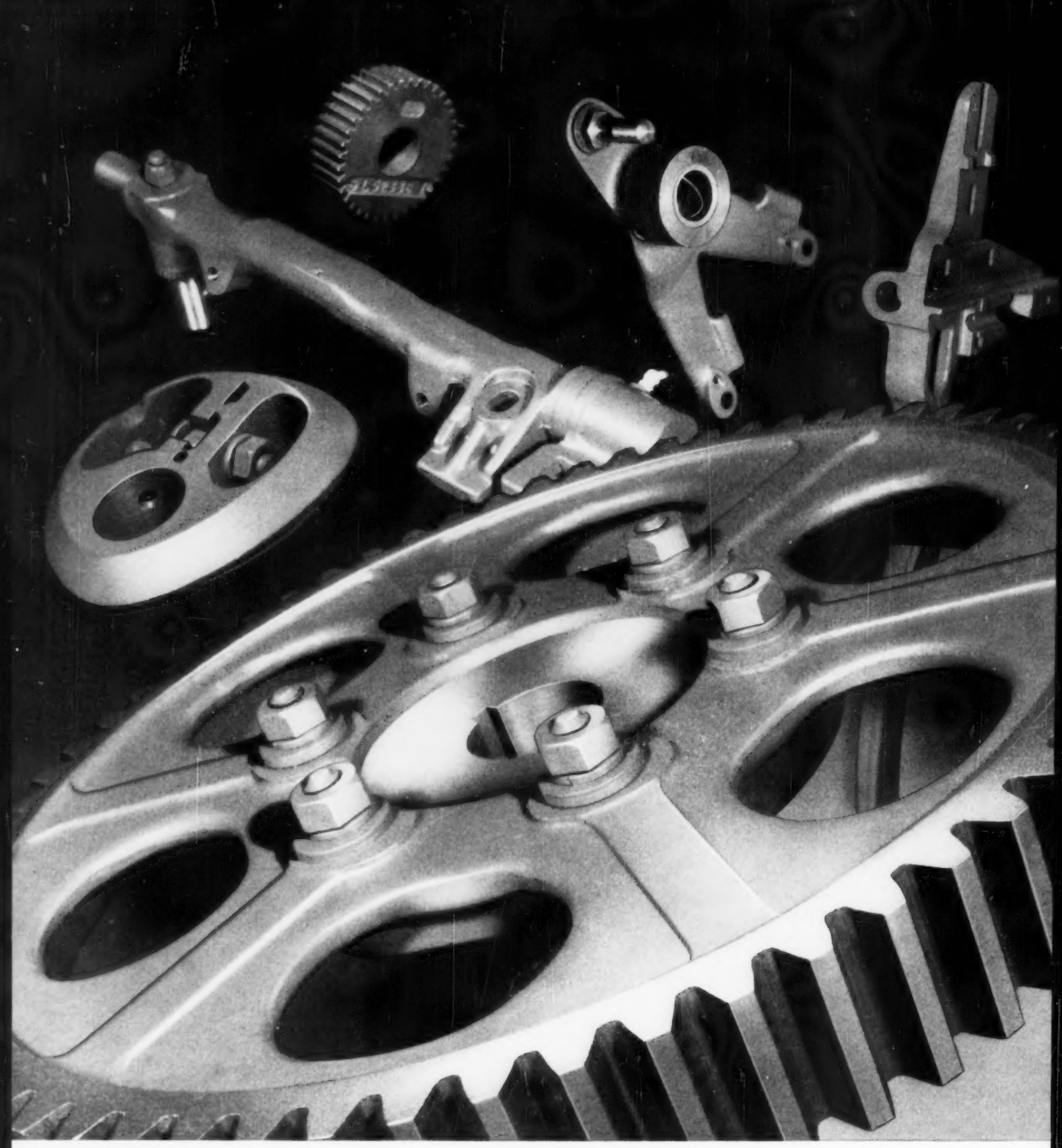
Verel in carpets

Arnel-Orlon blend fabrics

How to cut printing costs

Mill savings with Draper's magazine

AND 12 MORE USEFUL REPORTS AND EXCLUSIVE FEATURES



Cut Application Time and Maintenance Cost. Draper original repair parts are designed to meet specific loom conditions. Range of fabrics, loom speed, loom size and model, all influence the development of a Draper original repair part. Ease of application and accessibility are prime requisites in their manufacture. Original Draper parts cost less in the long run.

DRAPER CORPORATION

HOPEDALE, MASS. • ATLANTA, GA. • GREENSBORO, N. C. • SPARTANBURG, S. C.

THE NEED: An economical, expendable tube for shipping yarn

The textile industry needed to replace heavy, permanent-type dye tubes with lightweight, non-returnable carriers to reduce the cost of transportation in shipping yarn.

Sonoco recognized this need and assigned the job to its research department for a solution. As a result, Sonoco developed an economical one-time-use transfer, or push-out, paper tube with critical dimensions and controlled stability. Not only was the initial need fulfilled, but this new carrier made it possible to greatly reduce the inventory of stainless steel dye tubes formerly required. And, in many cases, the Sonoco transfer tube saved a costly rewinding operation.

Only Sonoco, with its modern laboratory, engineering and production facilities, could have answered this need with an economical, efficient carrier. It is typical of countless cases where Sonoco leadership in the development of textile paper carriers, based on 60 years' experience, has benefited the industry. Let Sonoco help you!

SONOCO

Products for Textiles

SONOCO PRODUCTS COMPANY

Main Office—Hartsville, S. C. • Mystic, Conn. • Akron, Ind. • Lowell, Mass. • Phillipsburg, N. J. • Longview, Texas • Philadelphia, Pa. • La Puente, Cal. • Atlanta, Ga. • Granby, Quebec • Brantford, Ontario • Mexico, D. F.

1003

MODERN
TEXTILES MAGAZINE

March, 1959 Vol. 40, No. 3

Modern Textiles Magazine
Established 1925

* * *

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* * *

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The Principal Trade Groups

American Association of Textile Chemists and Colorists ..... Lowell Techn. Inst., Lowell, Mass.
American Association for Textile Technology, Inc. ..... 100 W. 55th St., New York
American Cotton Manufacturers Institute, Inc. ..... 1501 Johnston Bldg., Charlotte, N. C.
American Cotton Manufacturers Institute, Inc. Man-Made Fibers and Silk Division ..... 10 East 40th St., New York
American Rayon Institute ..... 350 Fifth Avenue, New York
Man-Made Fiber Producers Association ..... 350 Fifth Ave., New York
Silk and Rayon Printers and Dyers Ass'n of America, Inc. ..... 1450 Broadway, New York
Synthetic Organic Chemical Manufacturers Association ..... 41 F. 42nd St., New York
Textile Distributors Institute, Inc. ..... 469 Seventh Ave., New York

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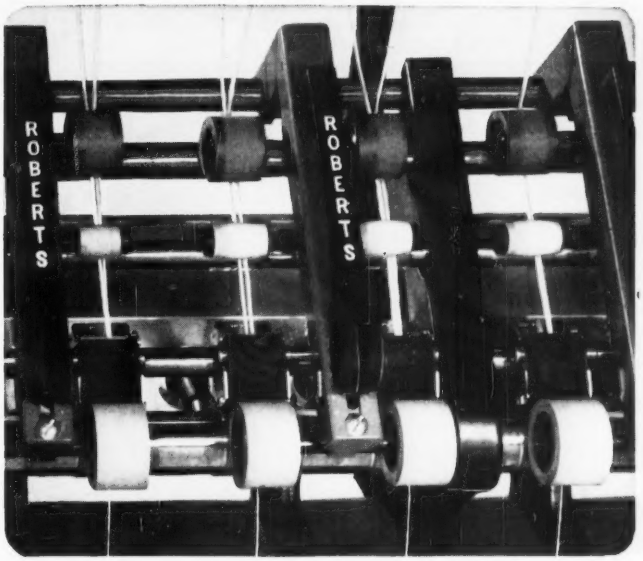
ROBERTS ARROW *LONG FIBER* SPINNING

- Any Fiber or Blend Synthetic or Natural
- Any Staple Length From 1½ to 8 Inches
- No Roll Setting Changes Needed at Any Time
- All Ball Bearing Construction For Smooth Operation



WITH ROBERTS *PermaSet* DRAFTING

ROBERTS ARROW

WM-2 ARROW *ShortFlo*

Rugged Chassis with Ball Bearings Throughout

Unitized Sectional Construction

Four-Roll Double Apron Drafting System

For Long-Staple Spinning, 100% or Blended

Drafts: 20 to 25 for Wool and Blends
25 to 50 for Synthetics and Blends

Front Roll Pressures from 90 to 120 pounds

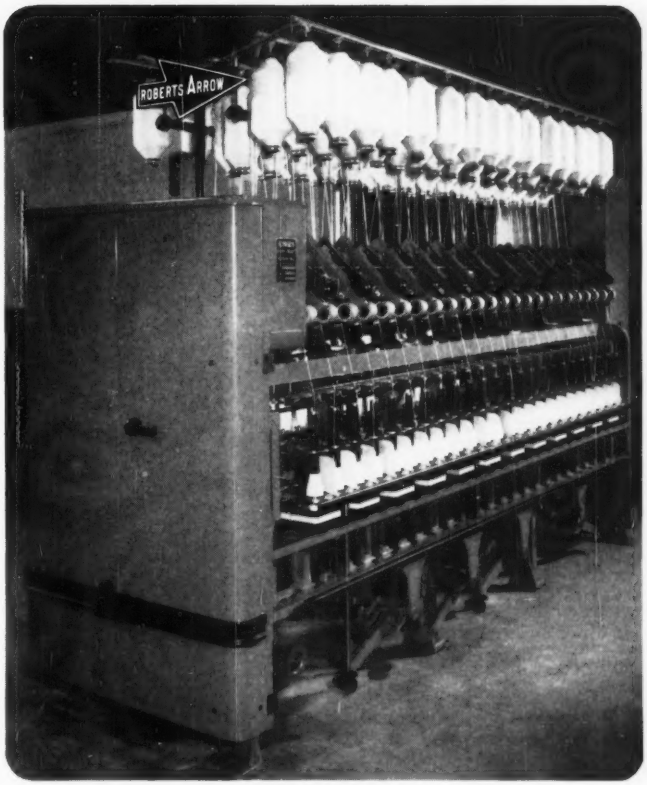
UnitVac Power Suction Cleaning with Individual Removable Flutes

Roberts AeroCreel Handles Large-Package Roving

Simplified Reverse Twist Arrangement

Completely Adjustable Draft, Lay, and Twist Constants

One Master Set of Gears for All Changes



Actual mill tests have proved that the ARROW WM-2 Worsted Frame gives higher quality yarns with fewer ends down and more even running at higher drafts and higher front-roll and spindle speeds.

ROBERTS COMPANY
SANFORD, NORTH CAROLINA

TRI Meets Mar. 23-24

A symposium on the properties and potentials of organic, melt-spun fibers will be a feature of the two-day annual meeting of the Textile Research Institute at the Hotel Commodore, New York City, on March 23-24. The symposium, under the chairmanship of S. Jack Davis, manager of the textile applications branch, Chemstrand Corp., will constitute the full day's session the second day. The program will include talks on polyamide, polyester and polyolefin fibers—nylon 6, nylon 66, Dacron, Kodel, polyethylene, and polypropylene—presented by speakers from Du Pont, Allied Chemical Corp., Tennessee Eastman Co., and Reeves Brothers, Inc.

The annual meeting is open to all interested in textile research. There will be a $10 registration fee and luncheon tickets will be available for $6 each day. Advance reservations may be made by writing to the Institute's Secretary, P. O. Box No. 625, Princeton, N. J.

New Lofting Process

A new process for production of lofted acetate filament yarn has been developed by Tennessee Eastman Co. Known as Eastman No. 75, the new lofted yarn, which is said to be made by a process differing from the Taslan method is being turned out in both solution-dyed and natural colors.

It is reported that the yarn is being produced in 2,200 denier with carpets as one of its first markets. Other end uses are being studied.

*13¾" and 21" diameter heads

MILTON BEAMS*
(for Nylon and rubber yarns)
GIVE YOU THE BIG BONUS OF

SUPER STRENGTH

The super strength of Milton's forged head Tricot and Raschel Beams is no idle claim—it's been proven by yarn producers, big mills and small mills alike!

They're light in weight, yet rugged in design to give true dimensional stability without objectionable deflection or distortion. Milton's forged, heat-treated aluminum alloy heads and extra heavy barrels become a one-piece beam by the continuous weld process first introduced in the field by Milton. Trapped ends of yarn or misalignment of keyways are eliminated because there are no mechanical joints!

You name the yarn . . . monofilament, fine denier, low turn or high twist—synthetics or rubber, Milton gives you true-running, well balanced beams to handle unprecedented yardages and extreme pressures!

WRITE FOR FREE BULLETINS . . . No. 49-A on Light Metal Beams and No. 54-S on Steel Beams. The Milton line includes warp beams for broad, narrow fabric, velvet and carpet looms, as well as light metal raschel, tricot and section beams.

Over a Quarter Century of Dependability in Yarn Beams

MILTON MACHINE WORKS, INC.

DESIGNERS • ENGINEERS • MANUFACTURERS

MILTON · PENNA.

MagneTrol Has New Name

Saco-Lowell Textile Machinery Division has announced that the "Magnetrol" name formerly used to describe this magnetic pressure system adapted to all roving, spinning and drafting elements, has now been changed to "Magne-Draft." The company believes that the new name more accurately describes the system's function. *For further information write the editors.*

Coloray Drapery Test

Courtaulds (Alabama) Inc. is planning, as part of its spring promotion of draperies of Coloray, the firm's solution-dyed fiber, to have the draperies actually tested in the tropical sunlight of Jamaica, Nassau and Bermuda over a period of months. Full-page 4-color consumer advertisements will appear in spring issues of leading magazines to tell the public the results of the tests.

Buys Shuttleless Looms

Woodside Mills has purchased 100 shuttleless Draper looms for installation in its Greenville, S. C., plant. About 160 conventional looms will be removed to make room for the new looms. The move, a Woodside Mills official said, is a $500,000 research project which is part of the company's continuing modernization program.

Special Creslan Plant

American Cyanamid Co. has started construction of a small-scale special production plant adjacent to its new Creslan acrylic fiber plant near Pensacola, Fla. The new plant, scheduled for completion next fall, will permit continuing improvements in processes and products, serve as a trial area for new equipment and techniques, and speed production of custom lots of fiber. The company announced that initial marketing of its Creslan acrylic fiber is scheduled for early 1959, from the output of Cyanamid's present fiber pilot plant at Stamford, Conn.

AHCO DYES *Quality-Integrity*

PROCION DYES

AND YOUR FUTURE

THEY'RE LINKED

TOGETHER!

IN DYEING APPLICATIONS

1. For cotton and viscose rayon fabrics normally dyed chiefly with direct dyestuffs, where novel methods of continuous dyeing can pay off economically.

2. For cellulosic fabrics with acetate and triacetate effect threads, where good reservation of the latter fibers is obtained and subsequent cross-dyeing with disperse dyestuffs is easily carried out.

3. For towelings, corduroys, draperies, upholstery fabrics, silk and many other fabrics, which individually vary in importance from market to market.

4. For lock-knit fabrics, where the cold-dyeing batchwise methods (for example, on the beck) are economically attractive and where Procion fastness to light, washing and rubbing offers technical benefits.

5. For tufted viscose rayon carpeting, where the shades and fastness of Procion dyes offer advantages over the commonly used directs, and where the novel pad-batch and cold dyeing methods are particularly attractive.

IN PRINTING APPLICATIONS

1. For brighter, faster shades on upholstery and drapery fabrics.

2. For padding of ground shades on white and colored printed resists, where a great advantage is shown in wash fastness when compared with direct-dyed groups discharge-printed.

3. Pajama cloths, napped fabrics, etc., including direct printing of Procion dyes on Procion ground shades.

4. On dress goods to permit easier processing and lower color cost, when compared with many other types of fast dyes.

ESPECIALLY EASY AND ECONOMICAL TO APPLY

Conventional dyeing or printing machinery fully adequate for applying Procion dyes.
Cold dyeing techniques save on steam.
Bright, fast shades in pale to medium depths obtained at costs approaching those of less-fast dyes.

#409-8

Ask For The New Booklet "Procion And The Future"

Procion dyestuffs and the processes for their use and application to textiles are the subject of patent applications in the U.S.A.

"Procion" is a trademark the property of Imperial Chemical Industries Ltd., England.

AH

ARNOLD, HOFFMAN & CO., INCORPORATED

55 Canal Street, Providence, Rhode Island, Est. 1815
A Subsidiary of Imperial Chemical Industries Limited, England
West Coast Representative: Chemical Manufacturing Company, Incorporated of California

Be Ready For The Procion Influence In Fiber Reactive Dyeing and Printing

for more than 35 years

Standard

SPECIALISTS IN

TEXTILE OILS

TEXTILE FINISHES

TEXTILE SPECIALTIES

PYROTEX 121

A detergent that is easy to handle, dissolves quickly and can be used on all fabrics. Its quick rinsability reduces the number of rinses thus cutting cost of operation. In dyeing, it promotes levelness, penetration and clear shades; the goods are left with a soft, pleasing hand.

STANDAFIN 77

A fully polymerized resin that requires no curing or after-treatment. The problems of yellowing of white and light shades are eliminated; the worry of odor is gone. This product imparts a soft, silky hand, is an excellent non-slip and has good anti-static properties. Because so little is needed for finishing, the overall cost is low.

STANDAFIN T.

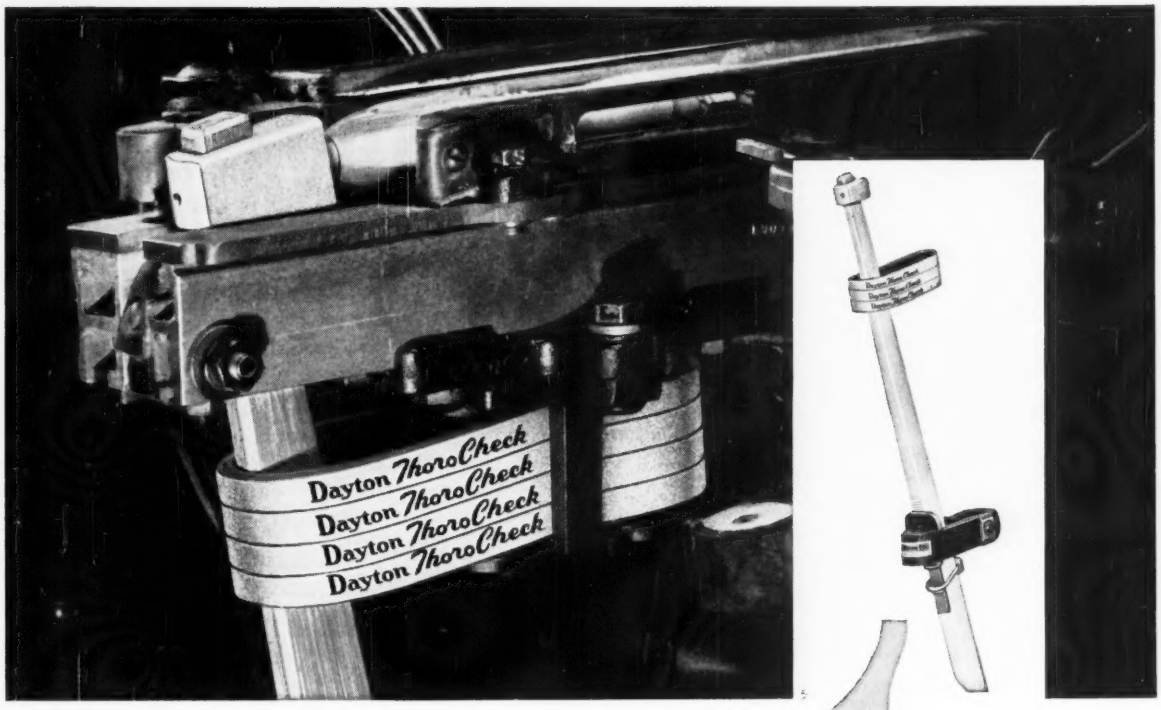
Specially designed for a taffeta finish requiring swish, non-slip and extraordinary character. It imparts a rustling sound, firm hand and fullness that is so desirable in this type of cloth. This non-curing resin requires no after-treatment or washing, is easy to use, will not mark off and is not affected by atmospheric conditions.

STANDARD CHEMICAL PRODUCTS INC.

HOBOKEN, N. J. • CHARLOTTE, N. C.

To Eliminate Downtime

Guard These Three Points with the Shock and Wear Resisting Dayton Combination



GET RIGHT TO THE SOURCE and you'll eliminate unnecessary downtime. Dayton has concentrated on perfecting a balanced combination of loop picker, check straps and lug strap . . . to protect all three points of shock and wear. And, it takes all three to absorb the shock of high speed shuttles, smoothly check the picker stick, and accurately deliver the shuttle return.

SHOCK ABSORBING Dayton Thorobred Deluxe-Lug Straps are molded together around a built-in plug that soaks up the hammering blows generated in the first instant of picker stick thrust. One-piece, link-free construction is the answer for longer service.

WEAR RESISTANT Dayton Thorobred Loop Pickers last. Here is why! Tilt of the picker face is perfect for shuttle contact . . . tapered hole and bottom insure accurate seating and protect against tearing the loop ply. Smooth, round corners prevent jerked-in fillings.

GRADUATED CHECKING ACTION of Dayton Endless ThoroCheck Straps with a stronger multi-ply construction . . . adds 6 to 8 months more of trouble-free service. With multiple straps to do the checking, there's never any drag nor interference with the shuttle throw.

©DR 1959

Start saving today by refitting your looms with the Dayton combination. Then compare the long life, freedom from downtime and, above all, the smoother picking action that only Dayton products can give you. Order through your mill supply jobber or write The Dayton Rubber Company, Textile Division, 401 S. C. National Bank Building, Greenville, S. C.

Dayton Rubber

Dayco and Thorobred Textile Products For Better Spinning and Weaving

OVERSEAS PLANT: THE DAYTON RUBBER CO., LTD., DUNDEE, SCOTLAND

ARNEL'S "STAMPS" OF CONSUMER APPROVAL

Consumer acceptance of Arnel triacetate works for you just as resultfully as you work with Arnel. You know Arnel for its ease of processing in the mill. The consumer knows Arnel for its ease-of-care. You know Arnel can be handled on all standard mill equipment. Mr. and Mrs. Consumer know that properly constructed Arnel fabrics offer both beauty and performance.

You see one side of Arnel—consumers the other. Let's consider MACHINE WASHABILITY.

To the consumer:

1. Almost all properly constructed fabrics containing 50% or more Arnel triacetate are completely machine washable.
2. *No* special care is necessary as regards the use of a detergent in laundering Arnel fabrics.
3. All 100% Arnel fabrics are unaffected by bleaches used in ordinary household or commercial laundry procedure.
4. All fabrics carrying the official Arnel symbol have been pretested for performance claimed—including machine washability. (Tests are conducted free of charge by the Celanese Corporation of America.)

To take advantage of the great consumer acceptance of Arnel, let Celanese work with you to develop new constructions in Arnel fabrics. Booklets 13A and 14A, containing the important technical procedure and facts about Arnel, are available by writing Celanese Corporation of America, Box 1414, Charlotte, N.C.

Celanese® Arnel®

District Sales Offices:

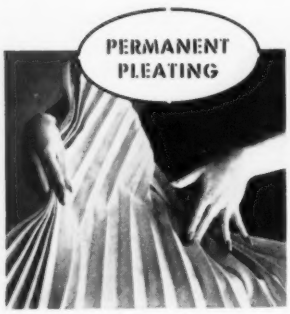
180 Madison Ave., New York 16, N.Y.
Room 10-141 Merchandise Mart, Chicago 54, Ill.
P. O. Box 1414, Charlotte 1, N. C.
200 Boylston St., Chestnut Hill 67, Mass.
3179 Maple Drive N. E., Atlanta 5, Ga.

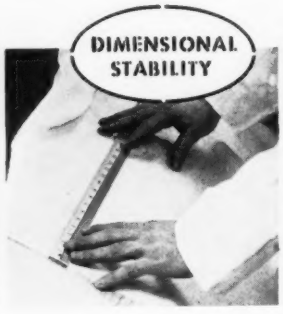
Export Sales:

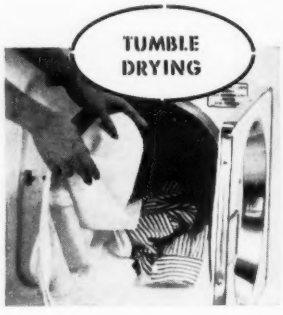
Amcel Co., Inc., and Pan Amcel Co., Inc.
180 Madison Ave., New York 16, N.Y.

In Canada:

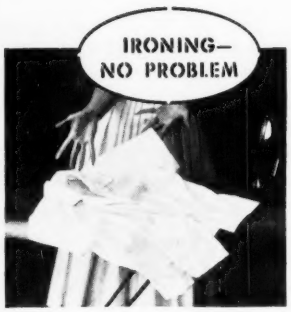
Chemcel Fibres Limited
1600 Dorchester Street West, Montreal, Quebec







Arnel . . . a



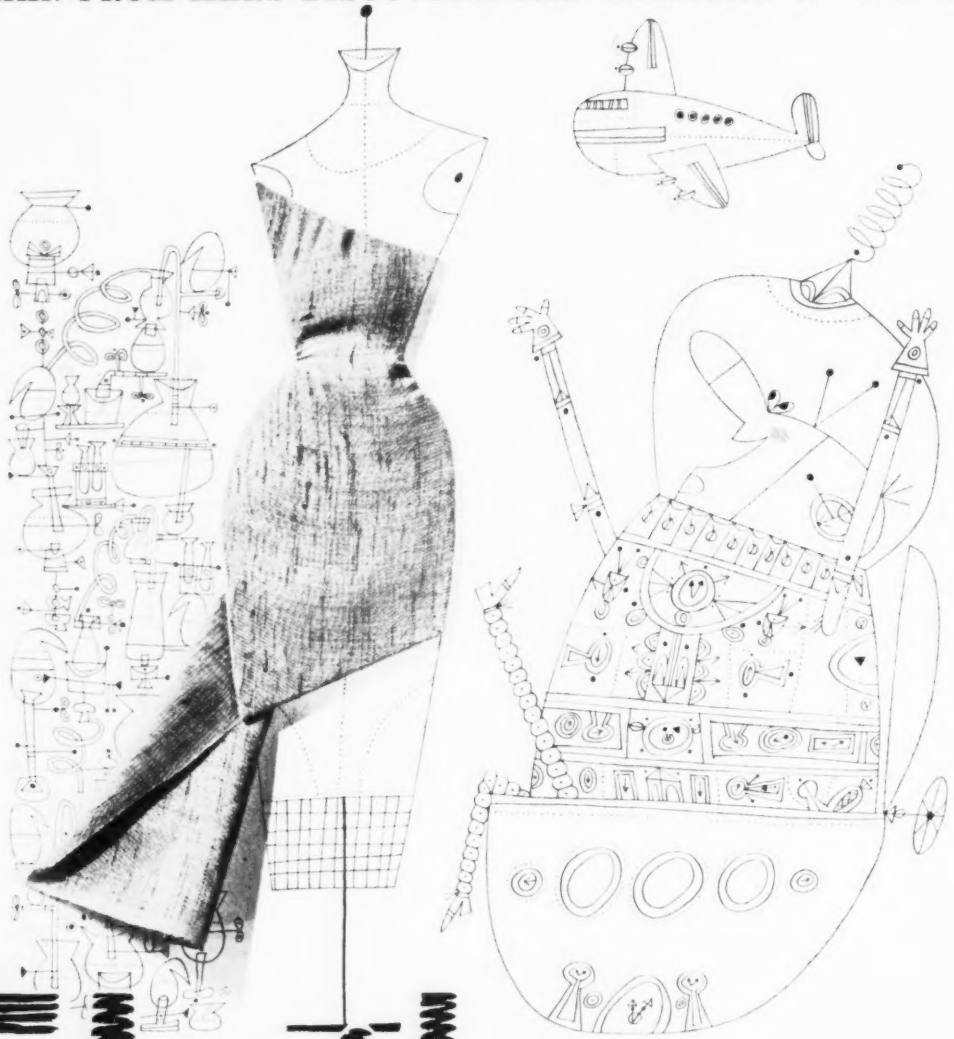
#1 in a series of ads reviewing the "reasons-why" for the consumer *acceptance of Arnel.*

ARNEL*

*This is the official Arnel symbol—evidence that this fabric of this new triacetate fiber has been pre-tested for performance claimed.

Celanese contemporary fiber

THE MAN-FROM-MARS DISCOVERS THE WONDERS OF THE EARTH



Flaikona®

"You earth people are an inferior race," says the Man-from-Mars, newly arrived. "Your planes are obsolete, your science is kid-stuff.

"But Flaikona . . . ah, that's something different! Our Mars-made flake fabrics are all spun flakes . . . they're coarse and bulky. Flaikona produces a flake fabric as light as a sheer!

"Mars-made flake effects pull out like poodle hair in summer . . . Flaikona flake stays put, even after washing and wear! Take me to your leader . . . Bemberg!"

What the Man-from-Mars didn't know: Bemberg, and only Bemberg in this wide, wide world, produces a continuous filament flake . . . wonderfully light, amazingly serviceable . . . calls it Flaikona. All the rest . . . the spun flakes . . . are exactly like the "Mars-made" variety.

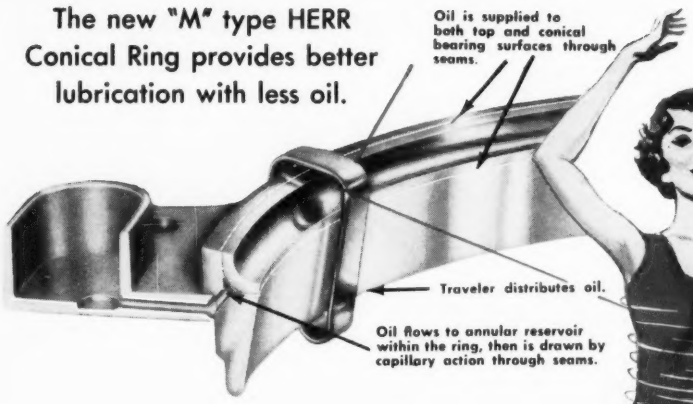
Call LExington 2-3520 . . . and get the whole, wonderful, cosmic story!

Bemberg®
ARISTOCRAT OF RAYON YARN

"FLAIKONA" IS AMERICAN BEMBERG'S REGISTERED TRADE MARK FOR CUPRAMMONIUM RAYON YARN

AMERICAN BEMBERG · Main Office: 261 Fifth Avenue, New York 16, N. Y. · Plant: Elizabethton, Tennessee

The new "M" type HERR Conical Ring provides better lubrication with less oil.


Oil is supplied to both top and conical bearing surfaces through seams.
Traveler distributes oil.
Oil flows to annular reservoir within the ring, then is drawn by capillary action through seams.

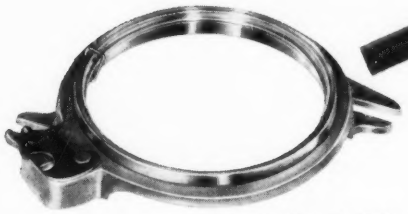
CORRECT SPINNING OR TWISTING OF ANY YARN

with HERR®

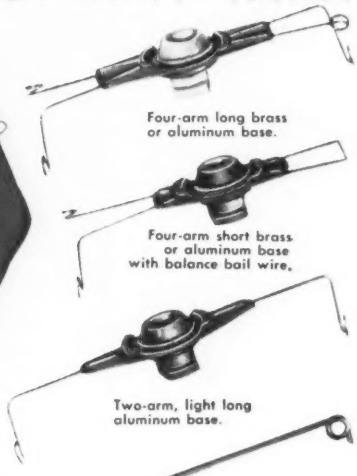
New "M" type

Conical Rings and Flyers

For spinning of medium to light counts of yarns.



For spinning and twisting of medium and heavy counts of yarns.


Four-arm long brass or aluminum base.
Four-arm short brass or aluminum base with balance bail wire.
Two-arm, light long aluminum base.
Special pollywog flyer for tire cord and heavy yarns.

In the mad rush to meet the popularity of knitted tights — the most extraordinary in years — the yarns made with Herr Conical Rings and Flyers are helping manufacturers meet high production operation with garments that have just the right stretch and fit. Tights made of HELANCA stretch yarns, produced with Herr equipment, have the curvy, stretchy, sleek look that brings the highest prices.

Herr Flyers produce light tensions at high speeds for accurate twist and yarn control.

New "M" Type Herr Conical Rings are self-lubricating with minimum oil consumption and long traveler life. Result is clean yarn, especially valuable in handling new bulk or stretch yarns.

Let HERR Engineers solve your spinning and twisting problems.

HERR®

MANUFACTURING CO., INC.

308 FRANKLIN STREET, BUFFALO 2, NEW YORK

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON, FIBERGLASS AND BLENDED YARNS OF ALL TYPES

No. 10 in a series—how your Du Pont salesman is backed by many sales-building activities, including Fiber Research, Technical Service, Fabric Development and Merchandising.

At Du Pont, electronic brains help unravel a knotty sweater problem

It looked as though several hundred thousand different sweaters of "Orlon"* acrylic fiber would have to be made and scientifically tested to find the best *combination* of hand and performance. And the job would take many years.

But Du Pont researchers didn't want to wait that long. They selected the important yarn and fabric construction variables and translated them into a form that could be handled by a giant electronic computer. It clicked off calculations at 22,000 per minute! And in six hours the Du Pont computer provided data on optimum constructions. In the photo at right, Orv Wetmore, a Textile Fibers research manager, shows a sweater made by the new technology to two of the engineers who analyzed the electronic data which made it possible.

Electronic computers are only part of the vast system of technical and scientific apparatus used by Du Pont to solve problems for the textile industry. Continuous research by hundreds of fiber technologists, backed up by teams of chemists, physicists, and other scientists, is devoted to the development, manufacture, and improvement of Du Pont fibers. Knowledge gained through this research is constantly being shared with the textile industry.

It has long been Du Pont's belief that the market for its fibers can best be advanced by providing helpful assistance to all levels of the textile industry. Through your Du Pont salesman you, as a customer, have ready access to a range of technical and merchandising information unique in the textile industry.

From raw fibers to retail sales
... Du Pont builds profits for you

PRODUCT and PROCESS NOTES FROM DU PONT

Stabilizing Warps of "Dacron" Polyester Fiber on the Slasher** — A practical method has been developed for stabilizing "Dacron" filament warp yarns, allowing the weaving of loom-finished fabrics. Warps having an acceptable shrinkage level (2 per cent or less when subjected to ironing temperatures of 325°F.) can be produced during slasher sizing by passing the warp sheet over a flat, heated surface prior to entering the size box. The instrument used in the operation is an electrically heated chrome-surfaced steel plate. Fabrics produced with these warps retain their stability through normal laundering or drycleaning processes. This development is expected to offer new opportunities to weavers of loom-finished fabrics, such as bedspreads, draperies, and casements.

"Ondulé" Rayon — "Ondulé", Du Pont's new continuous-filament rayon yarn containing randomly spaced, entangled slubs, is making fashion news in dresswear, suitings, draperies, curtains, and casements. It is now available in 150, 250, 450, 1,100 and 2,200 deniers. The unusual slub characteristics of "Ondulé" impart to fabrics a distinctive texture which resembles that obtained with certain types of silk. It is expected that this new yarn will also become important in men's sport shirts and neckwear.

Type 707 Nylon — Du Pont has announced a new nylon yarn designed and developed for cordage — Type 707 Nylon. Ropes made from this new nylon have 16% higher breaking strength and three times greater resistance to internal abrasion than regular nylon.

The new ropes are not weakened by rot or mildew and have exceptional resistance to wear, plus the light weight and easy-handling characteristics of conventional nylon lines.

*"Orlon" is Du Pont's registered trademark for its acrylic fiber.
**"Dacron" is Du Pont's registered trademark for its polyester fiber.

Enjoy the "Du Pont Show of the Month" on CBS-TV

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

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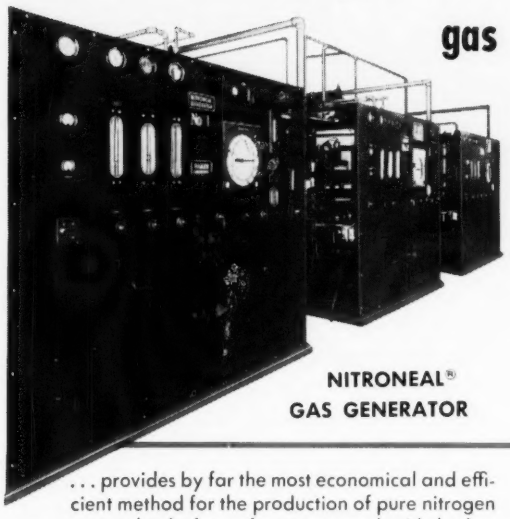

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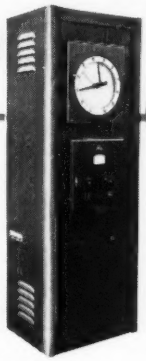

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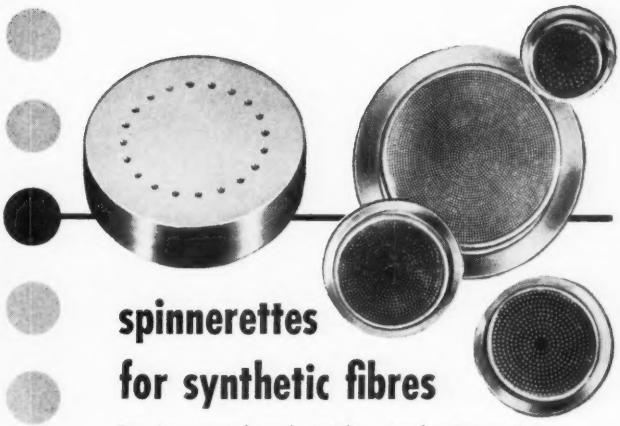

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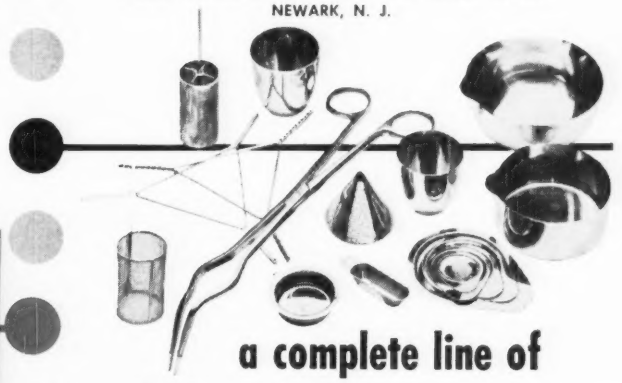

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MODERN TEXTILES
Magazine

Publisher's Viewpoint

A significant and helpful report

The report of the Pastore Committee on the problems of the American textile industry and what can be done to solve them will be widely discussed in coming months. Whether or not all its recommendations are put into effect, the committee's report is bound to serve as a helpful contribution to the improved well-being of the textile industry.

If for no other reason, it will accomplish this good purpose because it is an authoritative summary of the industry's major problems along with reasonable recommendations for their alleviation— recommendations that, for the most part, originated among the industry's leaders in testimony before the committee.

The Pastore report which has been adopted as its own by the full Interstate and Foreign Commerce Committee of the U. S. Senate, contains many meaningful elements all of which are worthy of careful consideration. But the meat of the report, in our opinion, lies in its recommendations as to ways to check the threat of imports from low wage countries, and its statement that depreciation rates now contained in Bulletin F of the Internal Revenue Service are obsolete.

With regard to the need for import quotas, we quote from the report itself: "We recognize that tariff adjustments cannot be used to regulate the flow of textile products into this country. The wide spread in wage rates and hence costs between European and Far Eastern producers makes it impossible to set a tariff duty which would be fair and equitable. Therefore we recommend that quotas be established which will permit foreign producers of textile products to sell in our markets within limits that will not further endanger existing textile capacity. We also recommend that quotas be established by specific categories of textile products. Although imports constitute a small fraction of domestic textile production, they have been concentrated in a limited number of categories with damaging consequences to specific segments of the domestic textile industry."

Here then is a proposal for ending the threat of low wage imports, one of the most vexing and urgent problems facing our industry. But as the committee notes, it is not a simple matter to establish quotas on imports. Nevertheless, the committee's report flatly recommends quotas as a solution. In suggesting the establishment of a textile interagency committee made up of representatives of the various executive departments of the government, the report suggests a method by which such quotas might be set and changed from time to time as changes become necessary.

Whether the means of setting quotas be the proposed textile interagency committee, or whether it take some other form, the objective for which our industry must fight has been clearly defined. An effective governmental mechanism must be devised for establishing quotas for textile imports.

Our great American textile industry, struggling to win a deserved and urgently needed higher degree of prosperity, ought to plunge strongly into an aggressive effort to obtain import quotas. Now that so weighty and influential a group as the Senate Interstate and Foreign Trade Committee has sanctioned this form of relief against low wage foreign imports, there can be no doubt in anyone's mind that quotas are entirely justified.

In connection with the need for realistic depreciation rates on textile machinery, the recommendations of the report are indeed sound and worthy of acceptance. The report recommends that the Internal Revenue Service publish a new schedule of depreciation rates that will take into account current industry practices and will permit a more rapid writeoff of new equipment for tax purposes.

Such a revised schedule has long been championed wisely and vigorously by the American Textile Machinery Association. It is to be hoped that, prodded by the authoritative and impartial nature of the Pastore report, the Internal Revenue Service will at long last accept the recommendations of the ATMA.

A. H. McCullough

OUTLOOK
IN TEXTILE MARKETING

By the Editors

For cellulosic fibers, which up to now have been rayon and acetate, a bright new era may have shown the first glimmerings of dawn last month.

In a meeting that stirred widespread interest throughout the textile industry, three major producers of rayon shared a common platform to announce a new class of cellulosic fibers. The occasion was the monthly meeting in New York City of the American Association for Textile Technology. The three rayon producers, who each had a speaker at the meeting, were American Enka Corp., American Viscose Corp. and Courtaulds (Alabama) Inc.

Each company announced the separate development of a new kind of cellulosic fiber having shrink-resistant properties in repeated laundering equivalent to cotton.

Speaking first, Courtaulds' man, G. V. Lund, reported on Courtaulds' new fiber, SM 27, which he said had a "high wet modulus" which made it "highly promising" for finishing by the compressive shrinkage methods "such as Sanforizing, Rigmel shrinking and the Fabric Research Laboratories' compactor process."

The second speaker T. R. Scott, Jr., described Enka's new Fiber 500 which, he said, yielded fabrics whose shrinkage "can be effectively controlled by Sanforization."

This treatment of controlled pre-shrinkage effectively eliminated, he said, the progressive shrinkage (in laundering) associated with rayon while retaining rayon's advantages in resin treatment and other properties.

The third speaker, American Viscose's G. G. Whytlaw, reported that test fabrics of his company's new Fiber 40 revealed that they accepted sanforizing "easily".

The Fiber 40 fabrics, he added, gave less than one percent shrinkage in the warp and no shrinkage in the filling. A test gabardine, of Fiber 40, he said, showed excellent stability, ravelled less than rayon and therefore, he concluded, should have no tendency to yarn slippage.

Millmen, eager to get in on the ground floor on a promising new development, will want to know just how available is this new kind of cellulosic fiber?

American Enka says that it has quantities of its Fiber 500 already in some mills for evaluation. It expects to have more available in the future for additional mills to test in yarn spinning and weaving.

Courtaulds stated at the meeting that small quantities of its SM 27 "were available for evaluation".

American Viscose describes itself as in "semi-commercial production" of its Fiber 40.

Another question millmen are asking is "how much will the new shrink-resistant cellulosic fiber cost?" The answer is about 40 cents a pound or perhaps a little higher.

When this estimated price is compared to the present price of ordinary rayon staple fiber of 31 cents, it would seem that the new cellulosic, in view of its reported advantages, will be quite reasonably priced. Keep in mind that the price of 40 cents will be an introductory price. As production increases, lower prices can be expected.

Thus not the least of the attractive qualities of the new fiber will be its cost to mills when we compare its expected price with cotton (about 35 cents) polyester (1.40) nylon (1.28) acrylic (1.28).

Another intriguing aspect of the new cellulosic fiber is what to call it? Its producers felt that, being a distinctive new fiber, it deserves a distinctive new name.

In fact, Charles L. Paine, Courtaulds' president who opened the AATT meeting, said that suggestions would be welcome from the industry as to a fitting name for the new kind of cellulosic fiber. One humorist at the meeting promptly suggested "noyar" which is rayon spelled backwards. Other suggestions, on the spur of the moment, were "Fabron", "Stablon" and "Apparon". Readers of MTM may have their own ideas for a fitting name for the new class of cellulosic fibers. They are invited to send them to the editors.

Next month's issue of MTM will carry exclusively the full texts of the three papers at the meeting describing the new fibers and the research that led to their development.

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The new president of the American Cotton Manufacturers Institute regards his lifetime in textiles as a means of serving his fellow men

A MILL WORKER AMONG MILL WORKERS—The young man in the center with the pens in his shirt pocket is James A. Chapman when he began his career in fabric manufacturing as a machine erector.

The dedicated career of James Chapman

By Jerome Campbell
EDITOR, MODERN TEXTILES MAGAZINE

THE MAN who becomes president of the American Cotton Manufacturers Institute this month has been literally immersed in fabric manufacturing since early childhood. Even as a boy, James A. Chapman, Sr. was a familiar sight to workers in Inman Mills as he toddled by the side of his father from one department to another.

In Inman, a little mill community near Spartanburg, S. C., they still tell the story of the new hand in the spinning room who asked his foreman: "Who is the little man in the panama hat that comes through here so often?"

In those days, back when the century was young, Chapman, now president of both Inman Mills and Riverdale Mills at Enoree, S. C., was known to the mill workers as "little Jim" to distinguish him from his late father whose name was also James A. Chapman. Today he is called "Mr. Jim" to distinguish him from his son, James, who as a vice president of Inman and Riverdale Mills is a seasoned textile man himself.

At 66 and looking much younger than his years, "Mr. Jim" is a comfortable, plain, easy-to-talk-to man who has a great preference for action over words. In his life, he says, there are three big interests—his family, the Presbyterian Church, and Inman and Riverdale Mills. To these three may be added another—the textile industry to whose problems he has for years devoted a big share of his energies motivated only by the unselfish wish to advance the welfare of the best interests of textile manufacturing.

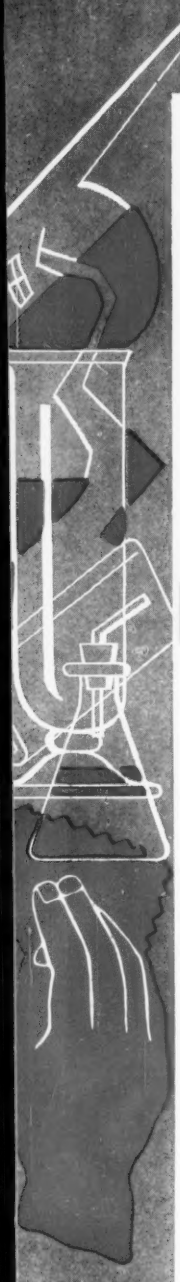
As president of ACMI for the next 18 months he will bring to a distinguished climax his many years of activities on behalf of the textile industry. These services began long ago when he first went to work in Inman Mills. As early as 1923, he was president of the Southern Textile Association. In 1943, he completed three years of service as president of the South Carolina Textile Manufacturers Association.

Inman Mills was organized in 1901 by Chapman's father. The new company with a capital of $300,000 built a solid, old-fashioned four-story brick structure and got into the business of making cotton cloth which, in those days, was a relatively simple operation. In 1909, the mill's floor space was doubled by the construction of a wing. The ACMI's new president obtained his first experience in textiles working in this mill as a machinery erector during his summer vacations from high school.

Later, after he had graduated from Wofford College and studied some engineering at Cornell, Chapman came back to the mill full-time under Gordon Cobb who was then superintendent. In 1916, Cobb decided to leave for another job. He told Chapman's father who was president that he wanted to recommend a good man to take his place. "Who is he?" the elder Chapman asked.

(Continued on Page 57)

DYEING and FINISHING SECTION



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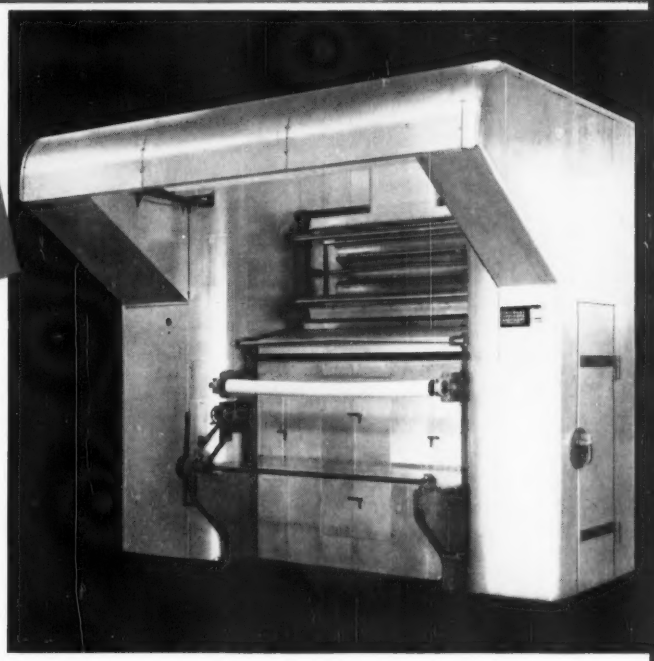

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Some ways to cut printing costs

By Raymond W. Jacoby
DYEING & FINISHING EDITOR

IN ITS SERIES entitled "Finishing Plant Economy Tips" MODERN TEXTILES MAGAZINE has been pointing out ways to cut costs in finishing plant operations. The financial statements for the twelve months of 1958 which have been appearing in print during recent weeks show dramatically the wide variations which exist in the dyeing and finishing trade. They also present emphatic evidence of the opportunities which also exist.

In two successive days the following headlines appeared in a daily trade paper:

6 Months Earnings Nearly Doubled
Earnings Decline 55% in First Half

These referred to the final six months of 1958. It is hard for many people to comprehend that these are the statements of two comparable companies in the textile industry. There is nothing in the geographical location to account for the difference; as a matter of fact, the company which made the better showing is considered to be at a disadvantage geographically.

On the other hand, there are people engaged in technical service in the textile industry whose work brings them into close contact with operations in competing plants. To them such wide variations in financial operations are readily understood. Many operating practices are based upon opinions and prejudices which oftentimes are widely divergent; the amazing point is how there can exist in one industry such contradictory ideas and operations.

Unsatisfactory financial operations are rarely due to one major difficulty. Usually it is a combination of many small items. Accordingly, every detail, no matter how insignificant it may seem to be, should be watched and studied carefully.

Textile finishing is a volume business. Very small fractions of a cent per yard in various operations can accumulate into an appreciable amount, and can be the reason for the wide contrast in earnings mentioned above. Money expended for services of individuals to act as "watchdogs" for every item of cost, can be one of the best investments a plant can make.

MODERN TEXTILES MAGAZINE will continue to publish constructive suggestions for improved finishing plant operations based upon the experience of its editors *and will welcome any suggestions or questions.*

Back-Grays and End-Cloths

PIECE GOODS finishing plants are usually consumers of textiles as well as processors of them. This consumption is in their use as back-grays in printing and as end-cloths in dyeing, as well as in some other operations.

While wash blankets have materially reduced the amount of cloths used as back grays, there are still many patterns or fabrics for which they are used. As back-grays are run until they are no longer usable, some plants use the cheapest cloth which they can obtain. An extensive study was made of various constructions of gray goods when used as back-grays. Each type was run until it no longer served its purpose economically. Records were kept of the total number of yards printed with each grade of cloth. The total cost of the cloth, divided by the number of yards printed gave the back-gray cost per yard.

It was found that the cheapest construction of cloth showed a much higher back-gray cost per yard printed than some of the better constructions, which had much more durability.

The handling of back-grays varies greatly from plant to plant so that the selection of the grade of cloth used for back-grays should depend upon conditions in the particular plant. A user of back-grays will probably find that a study as outlined above can materially reduce back-gray costs.

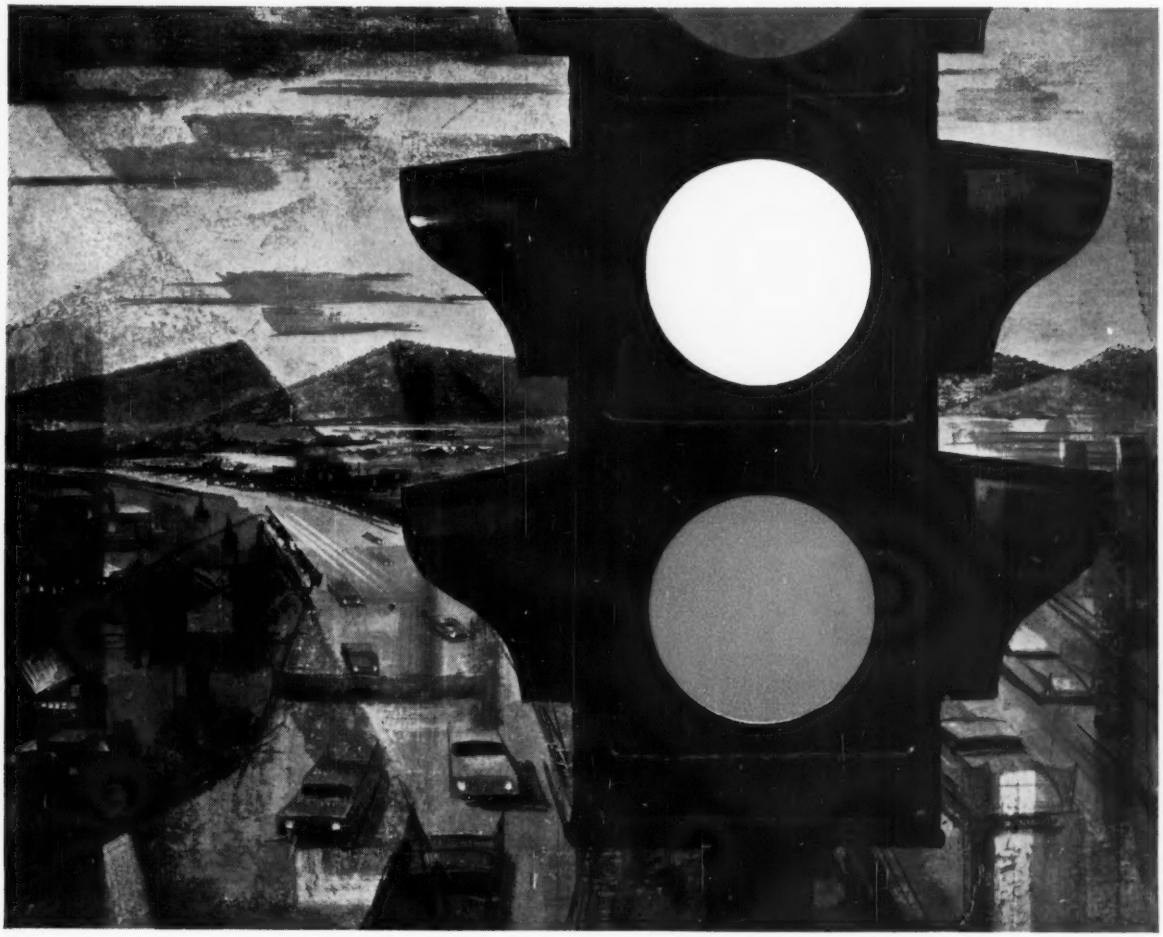
End-cloth is another item used in piece good finishing. The construction of the cloth and the method of its use can result in considerable variation in cost. Here again the cheapest grade is usually the least durable. They are generally torn off and re-used. Under this system, if the end-cloth is short at the start, it will very quickly become too short to use and wind up in the rag bag.

A plant study of this subject showed that using a better grade of cloth and making the end-cloths one yard longer at the start, materially reduce the expenditures for this item.

Color Costs

THE NEW COLOUR INDEX recently published by the American Association of Textile Chemists and Colorists and the British Society of Dyers and Colourists lists between four and five thousand dyes. Each one is a separate entity with its distinct chemical composition and properties. No one dye will color all fibers, but each one can be applied to a number of different materials. The cost of each dye depends upon the ma-

Geigy's new brilliant yellow is the signal for brighter greens



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terial and processes necessary for its manufacture and varies widely.

Furthermore, different methods of application can produce different effects in the finished product. As a result, the colorist has a countless number of possibilities to consider, and the final decision is often simply a matter of individual opinon. Usually there are as many different ideas as there are people to give them.

In textile printing these numerous and wide variations in opinion are important and have a tremendous bearing upon overall operations. The color cost in printing is an appreciable portion of the total operating cost. A small difference per yard can mean success or failure for the print works. Under these circumstances it is surprising that such a vital detail is governed largely by personal opinion.

For example, one print works manager may be very cost conscious; each morning he has placed on his desk the color cost per yard of each pattern printed the day before. If such cost is excessive (as it frequently is) he can take steps to see that it is reduced before reprinting. Nowadays, however, so few patterns are reprinted that in most cases it is too late to make any provisions for the future. The damage is done and the loss must be suffered. The only satisfactory way is to operate so that optimum conditions prevail at the outset. However, this is not as easy as it sounds, as a variety of opinions can exist as to proper consumption of color.

The color cost in printing is dependent upon the engraving and the cost per gallon of the print paste. Each one plays an important part and can effect the results appreciably.

Consider first engraving. The pattern is etched below the surface of the print roller. These etched out portions become wells that are filled with color which is then applied to the fabric. The depth of the engraving determines the amount of print paste applied. Right at this point personal opinions diverge greatly. The average engraving for dress goods patterns is about seven thousandths (.007) of an inch deep. This means that each thousandths of an inch in depth of engraving would account for 1/7 of the total color cost. In a pattern on which the color cost is two cents a yard this would represent a difference in cost of .286 cents a yard. In print works operation this is a very appreciable amount.

This subject was discussed with a man of many years experience, and who is in a position of authority to control such matters. He said, "If I reduce the depth of engraving I have to make my color stronger and change my doctor so as to apply more print paste." While this opinion was firmly held, it is a fallacy.

In contrast, let us consider the example of the cost conscious man referred to previously. He saw the color shop report on a pattern just printed. The color cost was 6.5 cents a yard; which he considered too high. He sent the rollers back to the engraving shop to be "polished" which means grinding down the surface which will, of course, lessen the depth of engraving. In the second printing the color cost was 5 cents a yard. Still too high! Another polishing after which the color cost was 4 cents a yard.

Another example which may be cited involved a pattern for printing large quantities of cloth for the government. The rollers, as engraved, were six and one half (.0065) thousandths of an inch deep. The color cost was 5.09 cents a yard. This was much too high as the work was awarded after competitive bidding. A new set of rollers was engraved. These were five thousandths (.005) of an inch deep. With them the color cost was 3.78 cents a yard. This was a reduction in color cost of 1.31 cents a yard. This would be very material at any time, but was especially so in this case, as several million yards were involved.

The other item is the cost per gallon of the print paste. Here, too opinions and practice are often far apart and frequently result in financial detriment. A breakdown might be revealing. The vat pastes used for printing cost about 15 cents an ounce. An output of one hundred yards per gallon of print paste would require that the printed area be about 50% of the total area. Under these conditions, each ounce of vat dye present in a gallon of print paste would represent a print color cost of .15 cents a yard. Again this is a substantial amount, and yet an examination of a printed patch and the print paste formula can be quite amazing. Some formulas in use have been encountered in which the dye concentration was so great, it is doubtful whether the fabric could absorb that much dye. Instances have been known where more and more dye was added until it has passed a point where the addition could be seen.

The most forceful way to drive this point home is to take the figures of the areas covered by print paste, and the concentration of dye in the print paste. Then convert these figures into percent dyeings. When this was done a colorist was amazed and chagrined to find that what he was doing was the equivalent of trying to make a 25% dyeing. There are many instances in the application of colorants to textiles where benefit could be obtained by following the lithographer's practice of using an additional roller or plate of black to obtain depth of shade instead of trying to pile on more color.

In these highly competitive days, such trivial items as a thousandths of an inch or an ounce should be respected. They can mean the difference between a profitable or an unprofitable operation.

Form Tarpaulin Group

Sixteen leading tarpaulin manufacturers have formed the Tarpaulin Manufacturers Association, for the purpose of establishing quality standards, enforcing FTC rules, adopting a buyers guide, and guarantee. The association also plans to promote the tarpaulin industry. At a recent meeting in Atlanta, Ga., the association elected Robert T. Goldberg, Hoosier Tarpaulin & Canvas Goods Co., as president; C. G. Mack, Hettrick Manufacturing Co., vice president, and Sam Brown, Brown & Brown, secretary-treasurer.

Corval Fiber Promotion

A promotional campaign has been announced to introduce Sangaree, a new wash-and-wear fabric by Milliken which contains 50% Du Pont Orlon acrylic fiber and 50% Corval, Courtaulds' new man-made cross-linked cellulosic fiber. Courtaulds is introducing its new fiber for the Spring season exclusively with Milliken and the fabric will be jointly promoted by both. Sangaree is being used by cutters in sportswear, dresses and suits for children, teens, juniors and misses. It is also available in piece goods. *For further information about Corval write the editors.*

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Trade name for DuPont's acrylic fiber.

For wash-and-wear fabrics

ARNEL-ORLON BLENDS

By H. F. Elsom & R. E. Lacy
CELANESE CORP. OF AMERICA

THAT ARNEL is a versatile blending fiber which can produce fabrics with exceptional wash and wear performance has been demonstrated by numerous examples, highlighted in recent articles in MODERN TEXTILES MAGAZINE, (July '58 p. 34; Oct. '58 p. 40) where blends of Arnel with such fibers as rayon, cotton and Du Pont Dacron were discussed.

Blends of Arnel with Du Pont Orlon acrylic fiber also can provide excellent ease-of-care and wash and wear performance in apparel applications such as women's skirtings, coats, suits and sport shirtings. When properly constructed, these fabrics are characterized by a soft, resilient hand and unique styling effects. Figures 1, 2 and 3 illustrate woven sport shirting, a pleated skirt and a spring coating, respectively. The fabrics have been made from a spun yarn blend of 60% Arnel, 40% high bulk Orlon. Their wash and wear performance is pointed up by the fact that each garment was run through five cycles in an automatic washer and dryer prior to photographing, and were judged to have a #4 rating, based on Good Housekeeping standards. Detailed constructions of these fabrics are shown in Table I.

Yarn Spinning and Weaving

Spun yarn blends from Arnel and Orlon may be made using either the cotton, converter or worsted spinning systems. Blends of Arnel with hi-bulk Orlon staple when processed on conventional cotton system equipment preferably should be sandwich blended dur-

Fig. 1—Sport shirt made from 60/40 Arnel/High Bulk Orlon after five washing and tumble drying cycles.

TABLE I
CONSTRUCTION DETAILS FOR SOME TYPICAL ARNEL/ORLON FABRICS

	Sport Shirting	Flannel Skirting	Women's Coating
Warp Yarn	16 ends 30/1 (19Z) 60% 2.5 d. x 2" brt. Arnel 40% 2.0 d. x 2" S.D. Orlon 2 ends 150/2Z/40 Black Arnel 2 ends 30/1 (20.5Z) 2.0 d. x 2" S. D. Orlon 2 ends 150/2Z/40 black Arnel	24/1 (19Z) 60% 2.5 d. x 2" brt. Arnel 40% 3.0 d. x 2" S.D. Hi Bulk Orlon	2/30 w.c. (20Z x 14S) 60% 5 d. x 2" dull Arnel 20% 4.5 d. x 2" S.D. Hi Bulk Orlon 20% 4.5 d. x 2" S.D. reg. Orlon
Filling Yarn	Same as warp in same pattern	Same as Warp	Same as Warp
Reed Width:	62.7 inches	60.5 inches	56.5 inches
Weave:	1/1 Plain	2/2 R.H. Twill	4/4 L.H. Twill
Ends Per Inch:	76	62	34
Picks Per Inch:	58	54	34
Finished Width:	48 inches	45 inches	45 inches
Finished Count:	95 x 70	80 x 64	44 x 41
Finished Wt. (oz./sq. yd.)	4.2	5.2	7.1

FROM A KERNEL OF CORN THROUGH CHEMISTRY

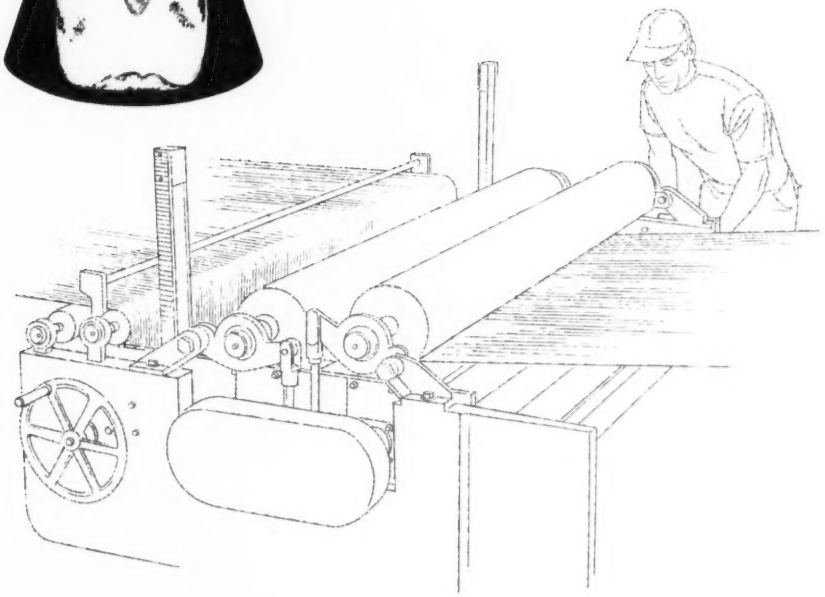

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Fig. 2—60/40 Arnel/Orlon skirting after washing and tumble drying.

ing the opening process. Handling on flat or roll top card is practical, using settings normally employed for synthetics of a given denier range. Double drawing for 6 or 8 ends up for each drawing has been satisfactory. Worsted spun yarns have been prepared by blending in opening; conventional synthetic setting of the worsted card; processing through three gillings, two or three pindrafting operations; and spinning on a double apron worsted frame.

Fabric Construction

Because the Arnel/hi-bulk Orlon blends will shrink during fabric finishing, it is necessary to weave fabrics in an open condition in order to obtain the desired fabric character. A typical blend of 60% Arnel with 40% hi-bulk Orlon can be expected to contract approximately 27% in width and 20% in length from loom construction to finished construction. This contraction in wet processing operation is vitally important to achieve the ultimate in fabric loft and hand. Mixtures of 60% Arnel with 20% regular Orlon and 20% hi-bulk Orlon give approximately the same shrinkage as when 40% hi-bulk fiber is used. Reed widths of approximately 60" are needed for weaving fabric which is to be finished to 45". Further reed adjustments may be required, depending on type of weave and weight of fabric.

Fabric Preparation and Dyeing

Practical procedures for preparing and dyeing Arnel/Orlon spun yarn blends using a one-bath dyeing method have been developed. Fabrics may be processed in either synthetic or woolen dyehouses which contain open width boil-off equipment and enclosed winches. Most shades can be dyed in an eight-hour shift or less to yield good color fastness to 140°F. washing and 20-40 hours Fadeometer fastness.

Fig. 3—Spring Coat made from 60/40 Arnel/Hi Bulk Orlon after five automatic wash and wear cycles.

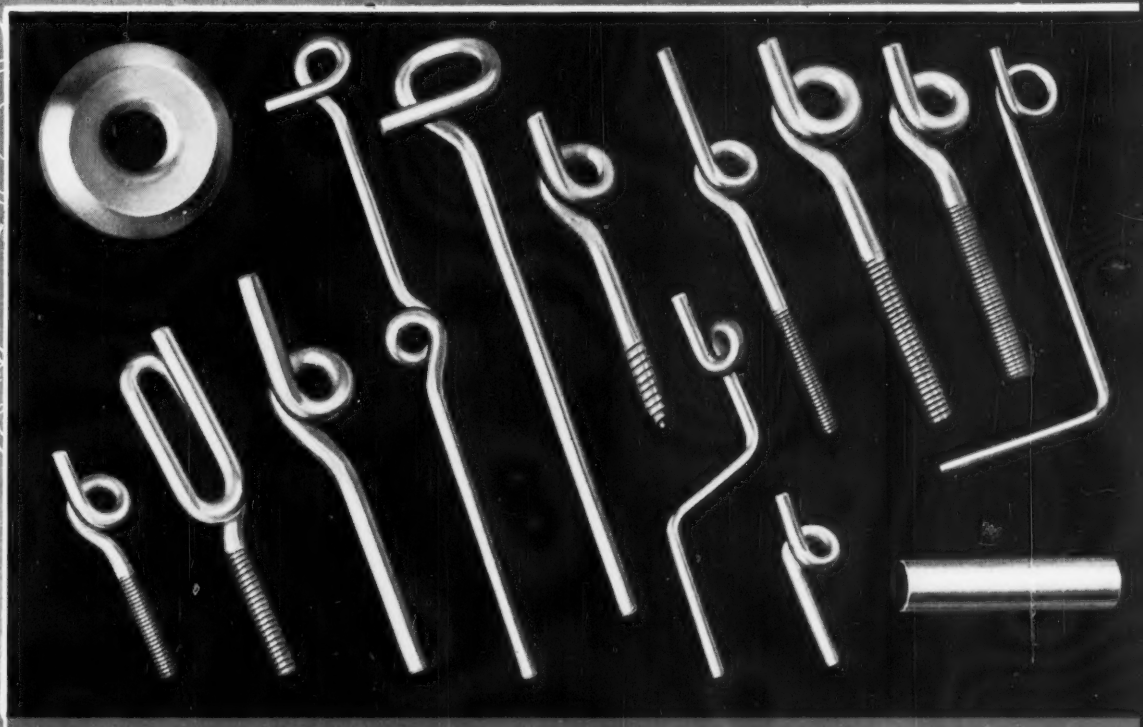
Fabrics should first be desized and run through an open width boil-off at 200-212°F. for 3-4 minutes to achieve proper shrinkage. Boiled-off fabrics have a good white base and do not require bleaching prior to dyeing in bright pastel shades. For fabrics which are to be finished white, the materials may be bleached with sodium chlorite and oxalic acid. Optical brighteners may be used if desired.

Arnel/Orlon blends can be reserve, cross or union dyed. Selected cationic dyes are applied to Orlon and disperse colors applied to Arnel. Either fiber may be reserved by proper selection of dyes. Union dyeing of most shades may be accomplished in a one-bath system by following the following sequence:

1. Load fabric on enclosed winch.
2. Add 0.5% Igepon T Gel and 0.1% sodium acetate to bath at 110-120°F.
3. Paste cationic dyes with 0.13% acid (56%), dissolve in hot water and add to dyebath. Run 5-10 minutes; add disperse dyes; run 5 minutes.
4. Adjust pH to 6.5-7.5.
5. Raise temperature to 180°F. over 30 minutes; then to 212°F. over 30 minutes.
6. Run at boil 45-90 minutes. Sample. Lower temperature to 180°F. before making additions.
7. Cool dyebath to 150-160°F. by radiation.
8. Add 0.25% Conco Inhibitor RF during cooling cycle to prevent possible "O" fading of disperse blue dyes.
9. Rinse warm and then cool.

(Continued on Page 33)

MACHINERY and EQUIPMENT SECTION



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Arnel-Orlon Blends

(Continued from Page 30)

TABLE II
CATIONIC DYES FOR THE ONE-BATH METHOD FOR DYEING ARNEL/ORLON BLENDS

Dye	Manufacturer*
Genacryl Orange G	General Dyestuff Corp.
Sevron Orange G	du Pont
Sevron Orange L	du Pont
Sevron Brilliant Red 4G	du Pont
Sevron Brilliant Red B	du Pont
Sevron Red L	du Pont
Sevron Blue 2G	du Pont
Sevron Blue B	du Pont
Sevron Blue 5G	du Pont
Deorlene Blue 5G	Ciba

* Prototypes of these dyes and other cationic dyes with good exhaustion and solubility at pH 6.5-7.5 should prove suitable for dyeing Arnel/Orlon blends by this method.

Table II contains a list of cationic dyes which have been found compatable for dyeing union shades on Arnel/Orlon using disperse colors on Arnel. Critical steps in the dyeing operation are as follows:

1. Use of selected cationic dyes which are stable and dye at a slightly acidic to neutral pH (6.0-7.5)
2. Use of minimum quantities of selected dispersing agents.
3. pH Control (6.5-7.5)
4. Addition of dyes and chemicals in proper sequence.

Union black shades require dyeing of the Arnel portion with a developed black and subsequent dyeing of the Orlon with appropriate cationic dyes.

Fabric Finishing

After dyeing and extracting, loop drying of Arnel/Orlon blends at 225-250°F. is suggested. Drying temperatures should not be in excess of 300°F. Fabric dried on pin or clip tenter frames should be run at relaxed width with positive overfeed.

Heat treatment of Arnel/Orlon blends is optional depending on ultimate color washfastness desired. Heat treatment will raise the color washfastness on dyed Arnel of the order of 20°F. Should this improvement be desired, fabric should be run with a minimum lengthwise tension at a temperature not in excess of 205°C. Excessive heat will result in discoloration and stiffening of the acrylic fiber content.

After dyeing and/or heat treatment, selective chemical finishes can be applied to achieve particular properties of hand. Cationic softeners can be applied by exhaust or pad application. Semi-durable softeners such as methylol stearamide and silicones can be applied to achieve softer and smoother surface features. Water repellency may be attained by the use of silicones which require a low curing temperature. Antistatic finishes such as a thermosetting polyelectrolyte resin (Aston, a trademarked product of Onyx Oil & Chemical Co.) have also been found satisfactory.

Arnel/Orlon flannel and pile fabrics can be napped, brushed and/or sheared as required. Semi-decatizing with a soft blanket can be used to flatten the face or give a fuller hand. ■

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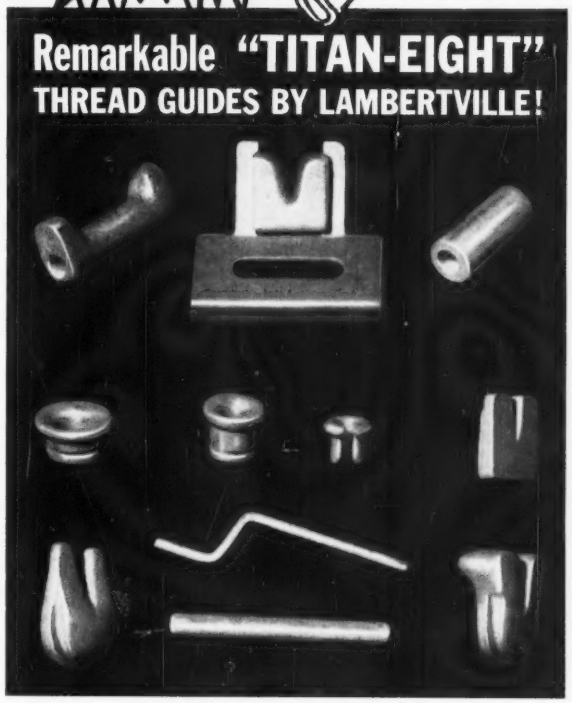

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THE MAGAZINE AT WORK—Here is a Draper loom equipped with the automatic filling magazine. Full magazine is seen in operating position while empty magazine at far right is shown ready to be taken back to winding room.

DRAPER'S FILLING MAGAZINE

As more mills install the new automatic device makers of filling winders are adapting their machines to wind bobbins specially for its needs

By the Editors

BY REDUCING filling handling to a minimum, Draper's automatic filling magazine, now being introduced to the textile industry, enables mills to cut labor costs. At the same time the Draper magazine allows more continuous loom operation and better performance. Cleaner yarns and fewer cloth seconds are also said to be direct advantages gained by use of the magazine.

Numerous installations have already been made in leading mills. With the cooperation of manufacturers of filling winders who have adapted their machines to wind bobbins for the new magazine, the unit's performance and operational efficiency is making it attractive to mill manufacturing executives whose goals are specific and based on close figuring of costs.

Filling winding has been the subject of long study over the years. Recent events have brought this operation into sharper focus. Progressive mills everywhere are taking a second look at the entire picture of filling, winding, and for that matter, weaving itself. With new machines such as Unifil which automatically winds filling bobbins right on the loom and with the advent of the shuttleless loom which does away with the filling bobbin as we know it, any new device offering new economies in winding must be studied with critical attention.

In the significant installations of the Draper automatic filling magazine to date, the unit has proven its worth and it is apparent that there is a definite place for it in many types of mill operation. The magazine is simply a metal container which fits onto a track on the loom and slides into position directly over the transfer mechanism. (The latter mechanism is fundamentally the same as that used for the standard battery.) But the magazine comes to the loom automatically loaded with anywhere from 80 to 96 fully wound bobbins.

Two magazines can be positioned on each loom, one to succeed the other in feeding bobbins to the shuttle. Thus the Draper magazine system provides an uninterrupted supply of as many as 192 bobbins compared with the conventional filling battery which has a capacity of 23 to 27 bobbins all of which must be placed in the battery manually. Empty magazines slide away on a track where they can be removed. The usual operation is to have the same truck that brings full magazines to the weave room return with empty magazines to the winding room.

The magazine takes the more common 1-3/16" to 1-7/16" diameter bobbins but Draper is prepared to go up to $1\frac{5}{8}$" diameter which probably would be the maximum under present conditions.

It is in the area of coarse counts where battery hand problems are more severe that the automatic filling magazine can show its best economies. Recent studies of several typical mill installations showed that the yield on investment after taxes ran from 11% for higher counts to as much as 45% for one mill running coarse counts in the range of 6's.

VIEW OF WHITIN-SCHWEITER WINDER—Although not shown in photo, Whitin has developed a bobbin conveyor and packing device to work in conjunction with the Draper magazine. Fully wound bobbins will be conveyed to a packing device at the end of the frame where they will be inserted automatically into the magazine.

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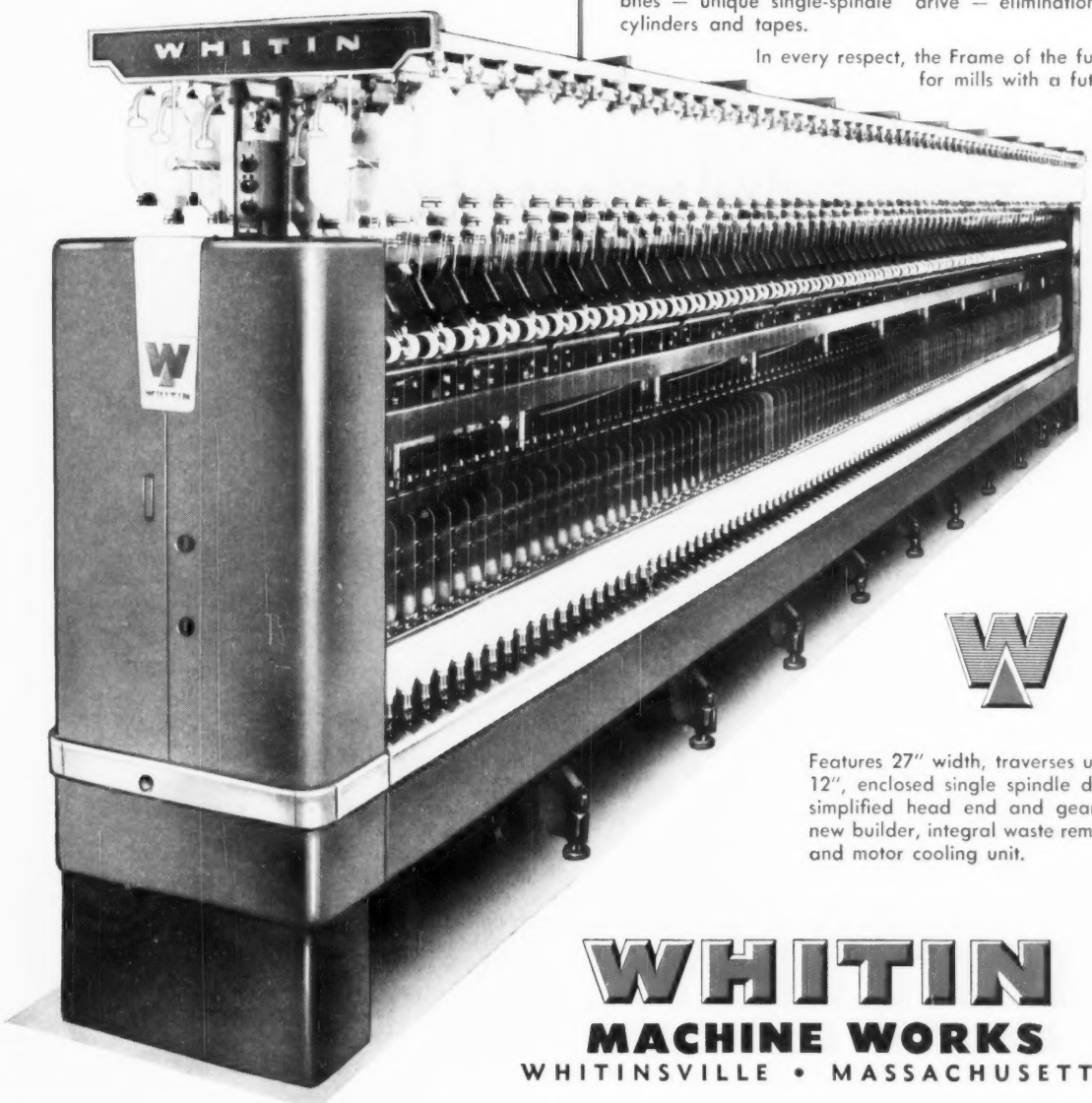

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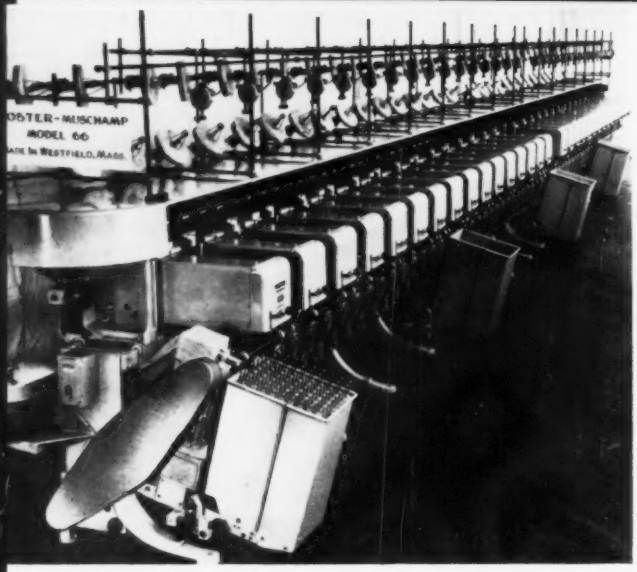
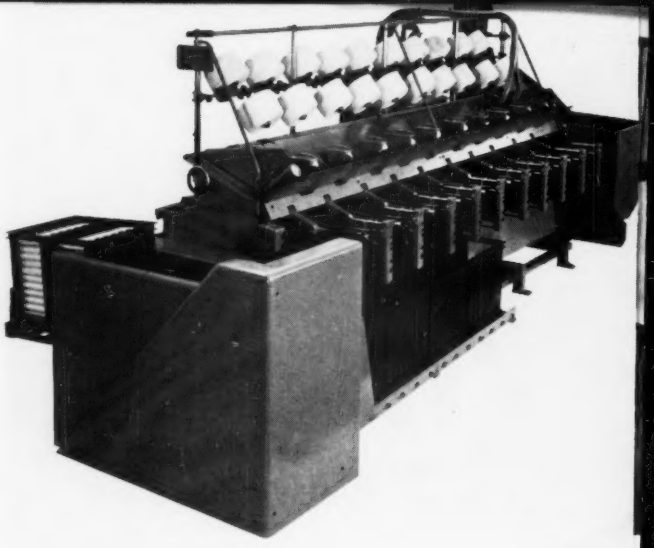


FOSTER MODEL 66—This automatic filling winder will soon be available with a special automatic doffing attachment which will convey fully wound bobbins to the Draper magazine for insertion.



SCHARER WINDER—This fully automatic filling winder has been adapted for the Draper magazine. When first of four magazines at front of winder is filled, it rolls onto the lifting device and next magazine moves in place.

A full magazine weighs about 32 lbs., of which approximately 8 lbs. represents actual yarn. Most mills are utilizing present filling trucks to transport the magazines. One mill is able to get 15 filling magazines whose dimensions are 9-5/16" wide, 15⅝" high and 15⅝" long, onto a single truck. This represents a load of some 120 lbs. of filling yarn sufficient to run better than 4½ hours with bobbins which last about 3½ minutes.

Mills using the magazines generally report that their filling winders are essentially unchanged. There is no great need to retain help and fewer people are required in the working area around the loom. Physical interference is minimized; and more important, shuttles, shuttle box parts and bobbin lengths do not have to be changed.

Compressed air is required at the loom in connection with the operation of the filling magazine and transfer mechanism. However, nearly every weave room is equipped with air and the present low-pressure system has the capacity to handle the extra air requirements. A pneumatic thread clearer is installed at the thread cutter.

SCHLAFHORST AUTOCOPSER—Here the Autocopser, manufactured by Terrell Machine Co., is shown preparing bobbins for the Draper automatic filling magazine.

But the whole story does not rest in the weave room alone. The filling winder must do a good job. A tip bunch must be put on the end of all bobbins; this bunch is most important to the proper operation of the Draper magazine.

So far, filling winders which have been adapted to make the necessary tip bunch to service economically the automatic filling magazine attachment are available from Abbott Machine Co., Wilton, N. H.; Foster Machine Co., Westfield, Mass.; Whitin Machine Works, Whitinsville, Mass.; Terrell Machine Co. (Schlafhorst), Charlotte, N. C.; Yeomans Textile Machinery Co. (Scharer), Spartanburg, S. C.

It so happens that Abbott winders are being used in the majority of existing Draper filling magazine installations because this type of equipment was already in these particular mills. And too, Abbott has worked hard to develop the necessary attachments and refinements to make their winder do an efficient job.

However, other winders are now coming into the picture as the Draper magazine attachment spreads. Here is a brief run-down on where the other winding machine manufacturers stand:

Foster Machine Co. now has in the final stages of refinement the necessary filling winder tip bunch attachment for use on the Foster-Muschamp Model 66 automatic filling winder. The wound bobbins are automatically doffed, conveyed to and placed in the filling magazine. Foster believes that the cost of this equipment can be justified on new loom installations where the cost of a standard battery would be applied toward the filling magazine and reduce the overall cost of putting picks in the cloth.

Whitin Machine Works has fully developed a bobbin conveyor and packing device to work in conjunction with both the Whitin-Schweiter "MS" and Fill-Master machines. This device will automatically convey the fully-wound bobbins from the units on a winder frame to the packing device at the end of the frame and will insert them into the box, filling the boxes from the bottom. Although Whitin has not actually

(Continued on Page 61)

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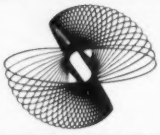

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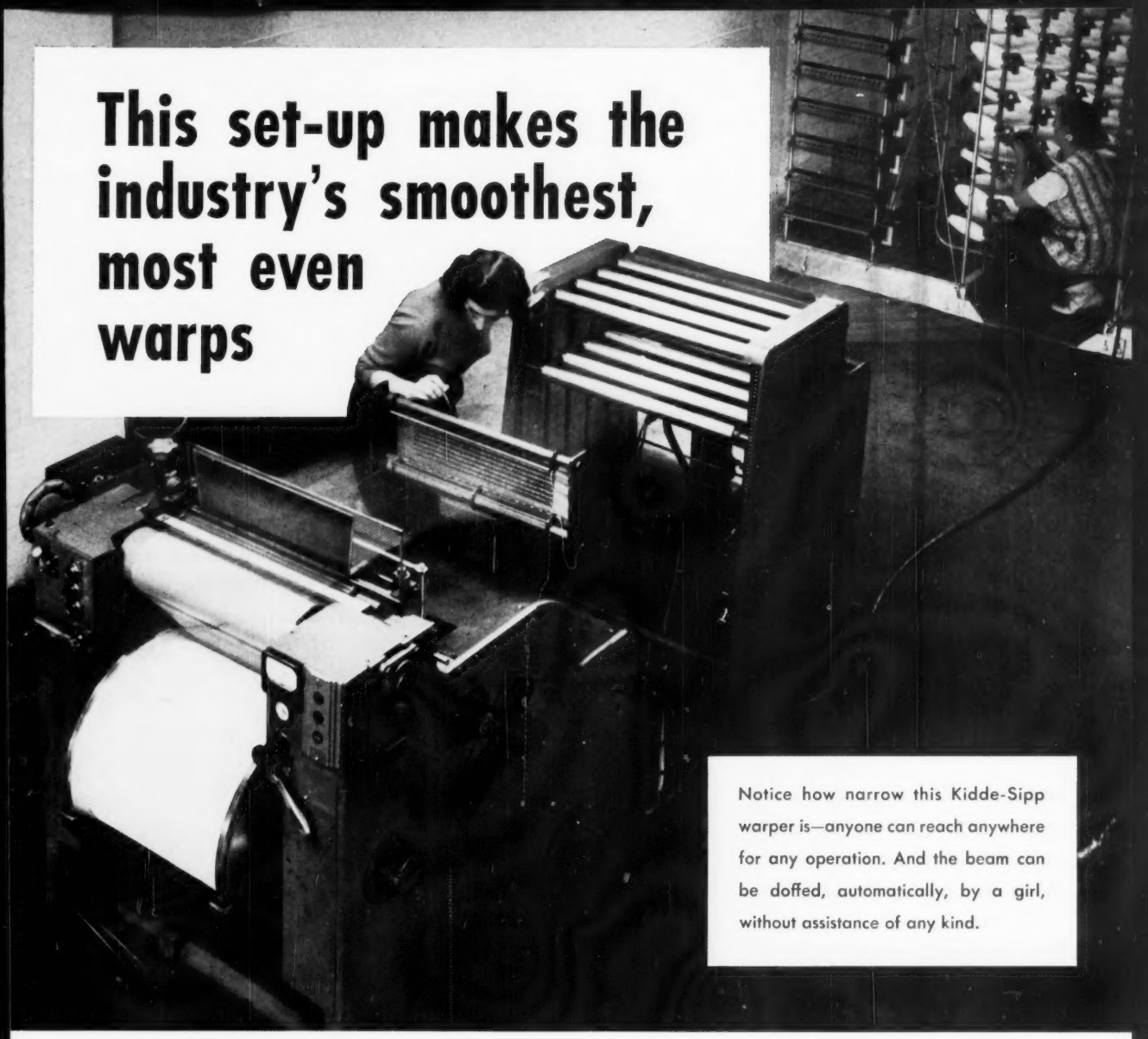

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The accumulator is electrically synchronized with the warper, so that, when the yarn must be backed off to recover a broken end, proper tension is maintained. And even the heaviest packages won't sag out of alignment on the versatile Kidde-Sipp Creel. New, stronger package holders and adapters are the reason. They are made of aluminum, which also puts a stop to rust rubbing off on the yarn.

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VEREL IN CARPETING

Here is a report on how Eastman's modified acrylic performs in floor covering fabrics

By W. I. Langstaff, R. F. Dyer & J. M. Grossman
TENNESSEE EASTMAN CO.

IN THE FALL of 1956, Eastman introduced for general textile uses, Verel, a modified acrylic staple fiber. In considering the characteristics of this new fiber, it became apparent that Verel had outstanding potential for use in floor coverings. For this reason a development program was undertaken to engineer a Verel carpet fiber.

In developing an acrylic type fiber for floor coverings, it was the goal of Eastman to arrive at a fiber which would have, not just one or two desirable features, but the best possible combination of all required characteristics. In determining these characteristics, the physical properties, dyeing and processing of the fiber were considered along with carpet manufacturing, the performance, and consumer appeal of the carpeting. Naturally, the greatest emphasis was given carpet performance factors. It is the purpose of this article to discuss the ways in which Verel meets the requirements necessary for an outstanding floor covering fiber.

Fiber Properties

Verel is a modified acrylic fiber. By this we mean that while Verel is composed chiefly of acrylonitrile, certain modifiers have been added in the chemical make-up of the fiber to impart improved whiteness, flame resistance, optimum moisture regain, and greater affinity for dyes. The carpet pilling problem encountered with fibers of exceptionally high strength was taken into account in adjusting the strength and stretch of Verel. Accordingly, Verel carpet staple is a fiber of adequate, but not high, strength and moderately high elongation. Fiber physical properties are given in Table I.

Of more significance to the carpet manufacturer is the data presented graphically in Figure 1. Properties of comparable wool and Verel carpet yarns show Verel to have higher strength and stretch than wool and superior elastic recovery.

Verel fiber is highly resistant to attack by mildew, other microorganisms, and insects. It was unaffected

TABLE I
VEREL CARPET FIBER PROPERTIES

GENERAL	
Cross-section	Peanut
Specific Gravity	1.37
Moisture Regain	3.5 @ 4% (standard conditions)
TENSILE	
Breaking Tenacity—Dry (grams per denier)	1.4—2.0
Breaking Elongation—per cent	42—56
Yield Point—grams per denier	.6—.8
—per cent elongation	3.0—3.5
Modulus—grams per denier/100% elongation	30—35
Compliance Ratio	1.1—1.3
Elastic Recovery—per cent	80 @ 4% Elongation 50 @ 10% Elongation
THERMAL	
Thermoplastic Fiber	Can stand exposure to temperatures up to 300°F. Recommended processing temperatures 200—250°F.
CHEMICAL	
Effect of Acids	Excellent resistance even @ high concentrations.
Effect of Alkalis	Some fiber discoloration—No effect on tenacity.
Effect of Organic Solvents	Not affected by dry cleaning solvents or most organic chemicals other than acrylic type solvents. Dissolves in warm acetone.

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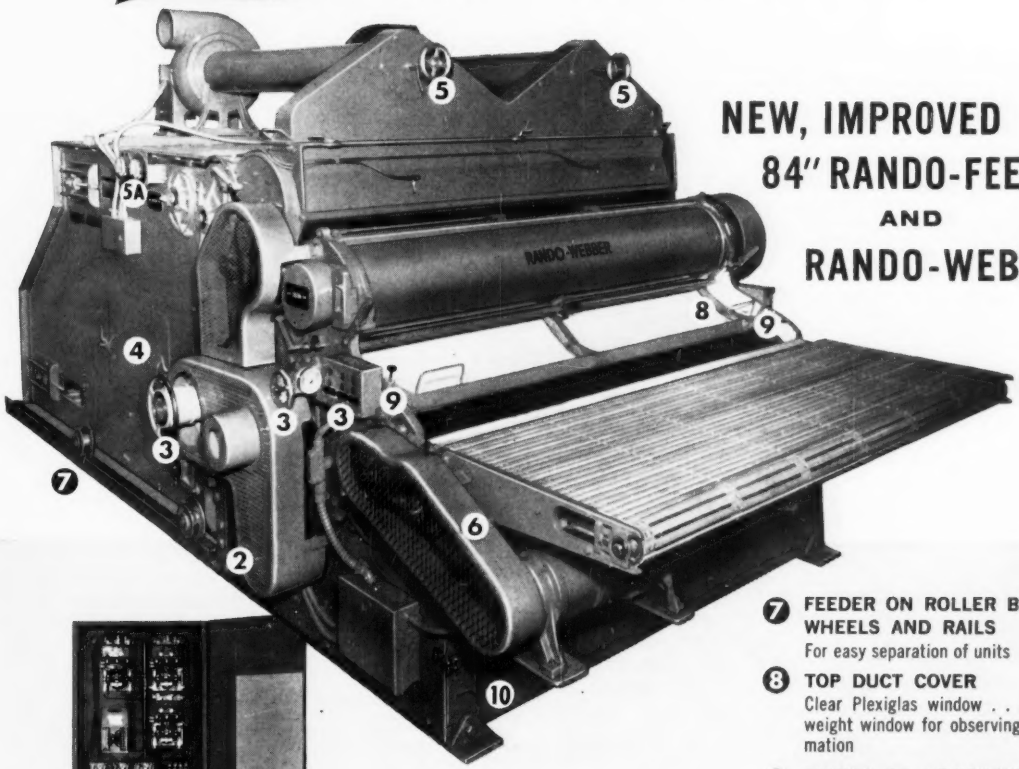

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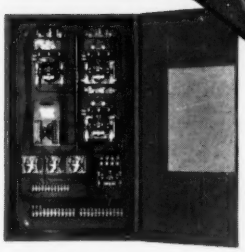

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after being buried for 12 weeks in moist, biologically active soil, whereas cotton decomposed in six days in the same test. Verel also has excellent weathering characteristics, as well as a high degree of resistance to a wide range of chemicals.

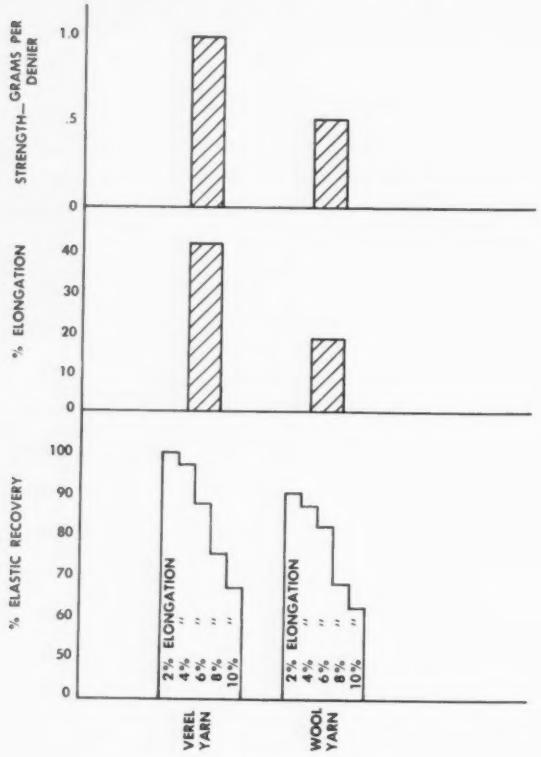

Fig. 1—Verel Yarn vs. Wool Yarn.

Fiber Dyeing

Both the affinity for dyes and the excellent whiteness made possible by Verel's chemical modification contribute to very satisfactory dyeing of Verel carpet staple. Verel may be dyed by any of three general classes of dye; namely, dispersed or acetate dyes; neutral-dyeing premetalized dyes; and basic or cationic dyes. For carpet use in which wash fastness is not a primary consideration, the acetate dyes are generally considered to be the best selection. When exceptionally bright shades are desired, basic dyes should be used. Light fastness is in the same range as that normally obtained with carpet wool.

Stock dyeing is recommended as the method which will give the best results in the manufacture of Verel carpets. Dyeing is carried out in conventional equipment at temperatures of 180° to 190°F. At temperatures above 200° F. there is a tendency for the fiber to pack in the dye kettle. On exposure to the hot aqueous solution of the dye bath, Verel delusters and becomes quite dull in appearance. For best appearance and performance results, this delustering must be reversed. Relustering is accomplished by a salt rinse at the end of the dye cycle.

Fiber Processing

Verel carpet staple can be processed satisfactorily on all of the systems commonly used in making spun carpet yarn. Lubricant and crimp level are carefully controlled in the manufacture of the fiber to insure good performance of the undyed staple. Staple length is, of course, adjusted for the needs of the system to be used. Dyed stock should be sprayed with ½ to ¾% of a suitable lubricant in a water emulsion during the opening or blending operation for good processing results.

Because of its freedom from foreign matter, Verel produces extremely uniform yarns and provides significantly higher yields than does wool. (For carpet yarn properties see Figure 1.)

Carpet Manufacturing

Carpets of Verel are being manufactured by both tufting and weaving processes. In some cases, it has been necessary to adjust tensions to obtain the best performance in weaving or tufting because of Verel's high elongation. In cut pile styles, because of Verel's inherent toughness, close attention to the sharpness of knives and shearing blades is needed. In some qualities the tendency of Verel to "bloom" when exposed to steam can be used to good advantage in obtaining maximum cover during carpet finishing.

Verel has the characteristic of becoming somewhat soft and silky at elevated temperatures. This results in a tendency for the pile to "iron" or take on a directional effect when dragged over face rollers while hot. For this reason, it is recommended that Verel carpets be finished face up and that they be allowed to cool below 180° F. before coming in contact with a face roller.

Carpet Performance

Regardless of what other factors must be considered, the real test of a carpet fiber lies in its ability to perform in service. In order to determine Verel's performance characteristics, a number of carefully conducted in-use studies of Verel carpeting have been made in comparison with wool and other fibers. These studies have been supplemented by laboratory tests and observations of carpets in home installations under conditions of use ranging from moderate to severe. An effort has been made to cover all the major factors of carpet performance, and each will be discussed separately below.

Crush Resistance and Resilience

In order to obtain as accurate and complete a picture as possible of its crush resistance and resilience, Verel was tested for (a) thickness change caused by traffic; (b) retention of work of compression after exposure to traffic; and (c) degree of crushing and recovery from static load. For this work stock dyed wool and Verel yarns of identical size and twist were tufted into standard cut pile and loop pile test carpets. These carpets were placed in a hallway with traffic of about 3,000 walk-overs per week. The carpets were vacuumed daily, and once each week they were taken up for thickness and work of compression measurements, after which they were replaced in a different relative position.

The curve showing per cent original thickness versus number of steps for seven weeks of use is presented in Figure 2. It can be seen that the Verel carpet resisted crushing to a greater degree than did the wool carpet. This type of comparison has been carried out with several different styles and constructions, and in each case, there was approximately the same relative difference in favor of Verel.

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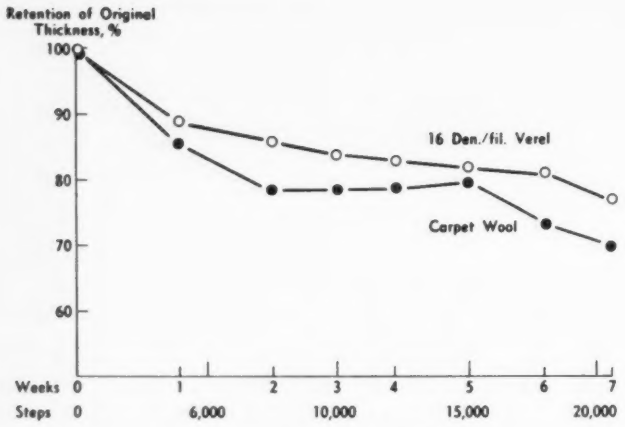


Fig. 2—Wool vs. Verel—Crush Curve.

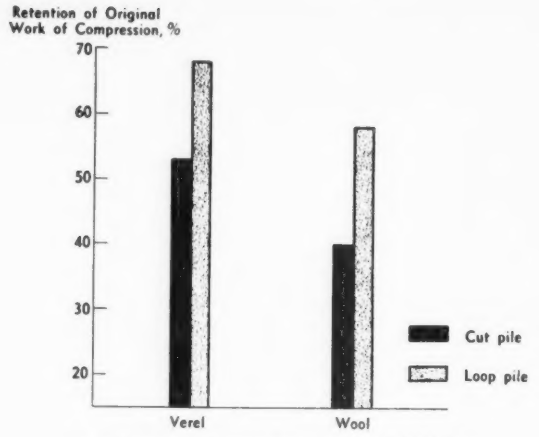
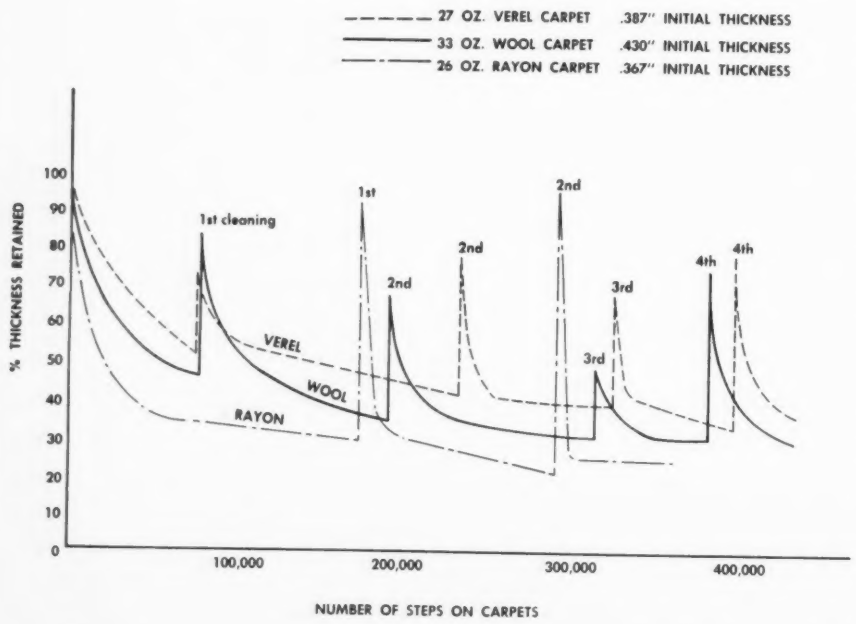
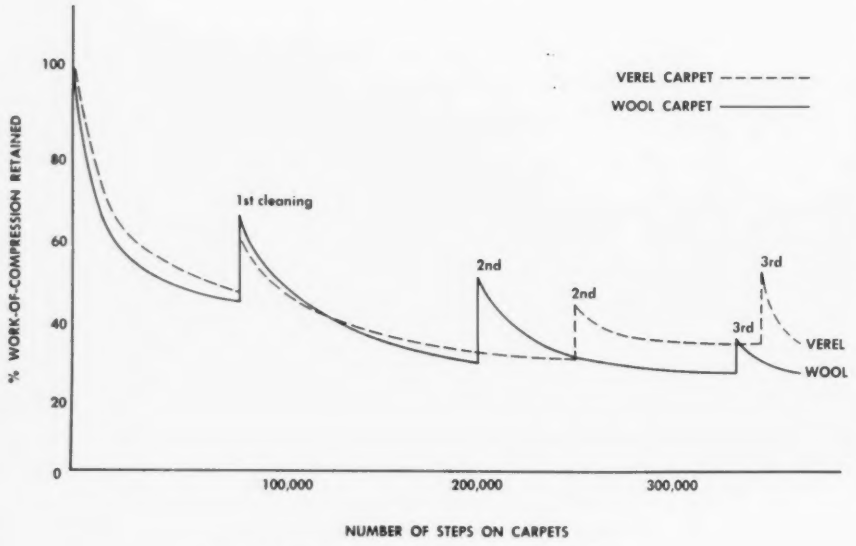


Fig. 3—Work of Compression—Effect of 20,000 Steps





Figs. 4 & 5—Crush-Clean Cycles—Verel/Wool/Viscose.

At the time of taking thickness measurements in the study described above, the work of compression, which is a measure of carpet plushness, was determined for each sample. The work of compression is the energy expended in compressing the carpet with a static load of five pounds per square inch. The per cent work of compression retained after 20,000 steps for wool and Verel in both the cut pile and the loop pile carpets described above is shown in Figure 3. It can be seen that Verel has an unusual ability to retain its original plushness while in service, and is superior to wool in this regard.

To determine the crushing pattern following professional cleaning, loop pile test carpets of wool and Verel were put through a severe service test of approximately 100,000 steps followed by in-plant rotary shampooing. Thickness and work of compression measurements were taken, and the soiling-cleaning cycle was repeated through three cleanings, each preceded by about 100,000 steps of soiling. The results are presented graphically in Figures 4 and 5, which include for comparison of thickness retention, a similar rayon carpet. It will be noted that the re-crushing rate after cleaning is extremely rapid in the case of rayon, but is much slower for Verel and wool. This test also bears out Verel's superior resistance to crushing from traffic and to change in work of compression while in service.

As an additional measure of resilience, the test carpets were subjected to both short-term and long-term application of a static load simulating a heavy piece of furniture. In the first test, a load of 25 pounds per square inch was applied for two hours and measurements were taken of the original thickness, the thickness immediately after removal of the load, and the thickness after vacuuming.

In the long-term test a 100-pound per square inch load was applied for 30 days. Measurements of original thickness, thickness immediately after load removal, and thickness 24 hours after load removal were taken. Data for these two tests are presented in Table II.

Texture Retention

Undoubtedly the performance characteristic most important to the owner of a carpet is retention of original appearance in service. While many factors contribute to this, texture retention is perhaps the most important—particularly in cut pile carpets.

Visual observation was made of the texture retention of cut pile and loop pile wool carpet and Verel carpet after on-the-floor soiling and after shampooing. Figure 6 shows the original, the soiled, and the shampooed Saxony texture cut pile samples. In this case the wool carpet contained 20% nylon. Both yarns were given identical treatment in making the carpets. Figure 7 shows a side view of the loop pile carpets after shampooing. It was noted that in loop pile carpets Verel had somewhat more tendency to pill than did wool, but the pills disappeared with increased traffic on the carpet.

Ability to retain its texture both in service and in cleaning is one of Verel's most important advantages over wool. This is explained to some extent by the fact that wool has a tendency to felt, while Verel does not. Also, Verel, being a thermosetting fiber,

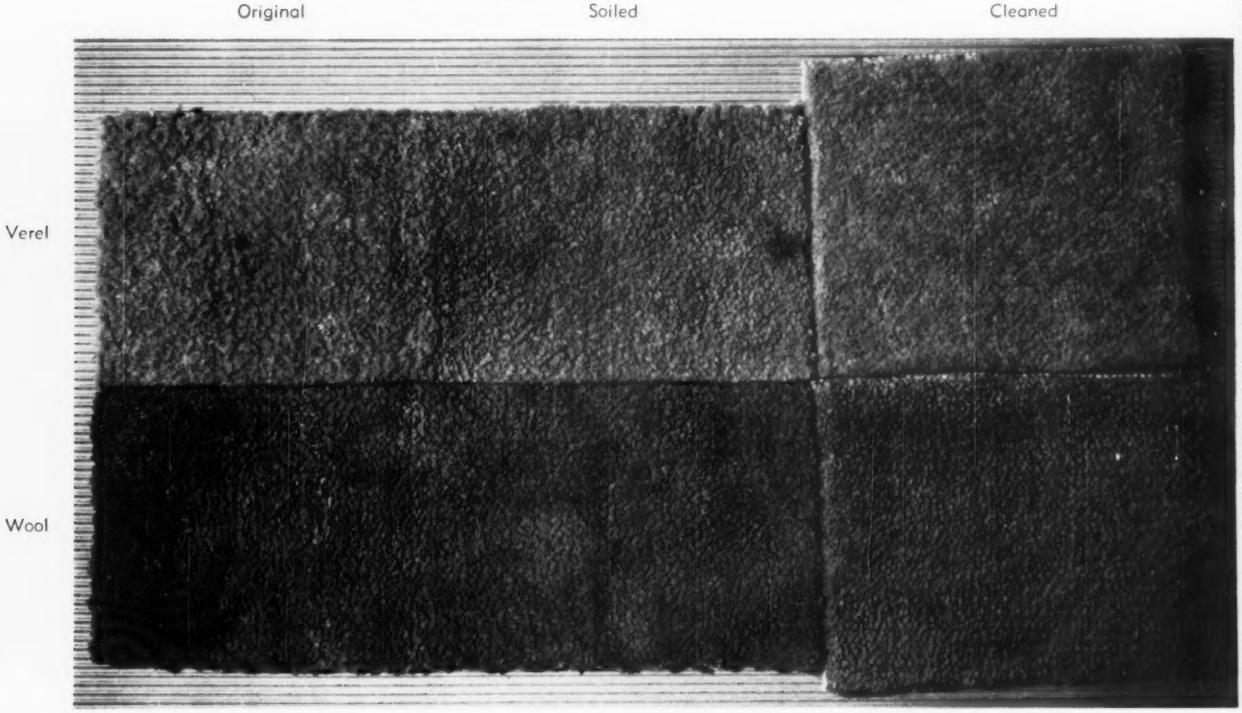
TABLE II
STATIC LOAD RESILIENCY TESTS

SHORT-TERM TEST Item	Verel Loop Pile	Wool Loop Pile	Verel Cut Pile	Wool Cut Pile
Carpet Weight, Oz./Sq. Yd.	31	33	41.2	41.6
Per Cent Original Thickness				
(A) After Load Removal	71%	84%	75%	82%
(B) After Vacuuming	93%	93%	92%	97%

LONG-TERM TEST Item	Verel Cut Pile	Wool Cut Pile
Carpet Weight, Oz./Sq. Yd.	39.8	39.9
Per Cent Original Thickness		
(A) 5 Minutes After Load Removal	29%	34.8%
(B) 24 Hours After Load Removal	31%	42%

Results of the short-term test indicate that wool recovers more quickly than Verel from such loads. However, after vacuuming both fibers have substantially complete recovery of thickness. The long-term test shows that both wool and Verel carpets are severely distorted by heavy loads applied over a long period of time. Recovery from such loads is both slow and incomplete. Wool was somewhat better than Verel and other synthetic fibers in this test.

Fig. 6—Texture Retention of Verel and Wool—Soiled and Cleaned.



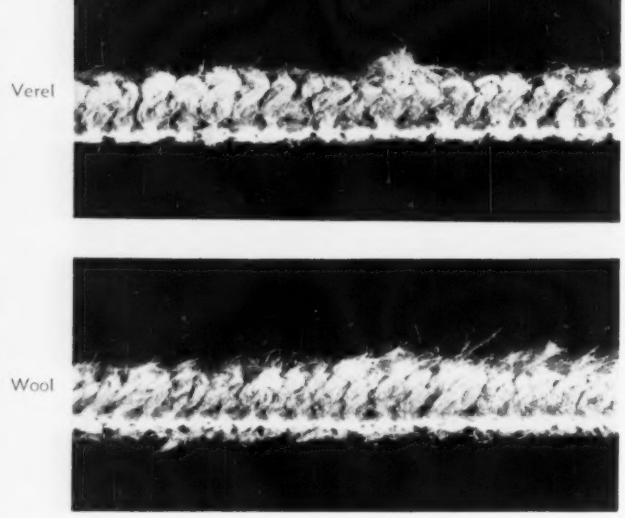


Fig. 7—Loop Pile Texture Retention.

takes a more permanent twist set than wool, and as a result of its low regain, is less affected by moisture during cleaning.

Soil Resistance

Because of the many factors, such as color, luster, and lubricant level which contribute to soiling in carpets, a great deal of care must be taken in relating the basic soiling characteristics of one fiber with another. To compare the soiling properties of wool and Verel, a high quality yarn of stock dyed wool was matched in color, size, and twist with a blend of 70% bright and 30% dull Verel fiber. The yarns were then scoured in skein form to remove all lubricants and were put into plush cut pile carpets of identical weight.

These test carpets were soiled by both exposure to traffic and by a ball mill type accelerated soiling test using artificial soil.

Visual grading placed the soil resistance of Verel significantly above that of wool in the accelerated test and the same as that of wool in the floor soiling test. To obtain a quantitative measure of these differences, specular and diffuse light reflectance readings were taken on the carpets before and after being soiled by the two methods outlined above. The reflectance readings and the per cent change in reflectance after soiling are shown in Table III. These data indicate that Verel has soil resistance superior to that of wool.

As a measurement of soil resistance only, reflectance data for the accelerated test are believed to be more accurate than that for the floor soiling, since the factors of crushing and texture change have an effect on light reflectance and these factors are not present in the accelerated test.

Based upon these and other test results it has been concluded that a blend of 70% bright and 30% dull Verel has soil resistance at least as good as that of wool and that a 50% bright and 50% dull blend of Verel has soil resistance superior to that of wool.

Cleanability

Cleaning studies conducted on both cut and loop pile carpets using on-location and in-plant rotary shampoo techniques show Verel to have outstanding cleanability. Not only do carpets of Verel give up soil readily, but they also retain their texture exceptionally well during cleaning. Comparative tests with wool have resulted in a higher cleanability rating for Verel, largely because of its superior texture retention.

A badly soiled Verel carpet, part of which was cleaned with a household detergent solution and a carpet cleaning brush, is shown in Figure 8. In general, neutral detergents do the best cleaning job on Verel carpets. The fast drying rate of Verel is an

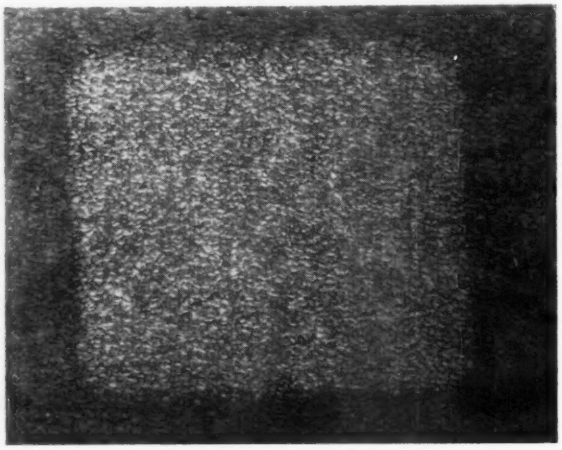


Fig. 8—Shampooed Area in Severely Soiled Verel Carpet.

TABLE III
SOILING COMPARISONS BY REFLECTANCE

ACCELERATED SOILING TEST

	Verel Carpet (70% Bright 30% Dull)		Wool Carpet	
	Specular Reflectance	Diffuse Reflectance	Specular Reflectance	Diffuse Reflectance
Reflectance Before Soiling	14	29	17.5	34
Reflectance After Soiling	11	24	12.5	27
Per Cent Change	21%	17%	28%	20%

FLOOR SOILING TEST

	Verel Carpet (70% Bright 30% Dull)		Wool Carpet	
	Specular Reflectance	Diffuse Reflectance	Specular Reflectance	Diffuse Reflectance
Reflectance Before Soiling	14	29	17.5	34
Reflectance After Soiling	14	20	14	22
Reflectance After In-Plant Shampoo	14	23	14.5	27
Per Cent Total Change	0%	20%	17%	20%

advantage in on-location cleaning. It is also significant that Verel does not lose strength when wet, as does wool, and is therefore not as subject to damage during cleaning.

Stain Resistance and Spot Removal

In order to obtain a complete picture of the stain resistance and spot removal characteristics of Verel, a study was carried out for Eastman by the National Institute of Rug Cleaning. In this study 50 typical "hard-to-remove" spots and stains frequently encountered by professional cleaners were set up on stock dyed Verel carpeting.

In general, excellent stain removal from the Verel carpeting was obtained. Many water soluble colors which do not respond easily to spot cleaning were readily removed from the Verel samples. Paints, lacquers, and dyes dissolved in alcohol or special solvents, and some tinctures of mercurochrome are capable of forming stubborn spots on Verel and may in some cases be difficult to remove completely. Typical stains that were completely removed are asphalt, gum, lipstick and rouge, gravy, blood, clay, soft drinks, juices, coffee, tea, wine, grass and leaf stains, and animal stains.

Wear Life

A stairway abrasion test is used at Eastman as a means of determining the wearing qualities of a given fiber or fabric. In this test, carpets are mounted without underpadding on movable stair treads located on a heavily used industrial stairway. The carpets are vacuumed twice daily and once each week the relative position of each sample is changed. The number of steps required to produce detectable wear and the number required to wear a sample to the backing are recorded.

Photographs of wool and Verel test fabrics of equal construction after 180,000 steps are shown in Figure 9. By comparison, a rayon carpet of equal weight would be worn to the backing by about 60,000 steps. The only fiber which has exceeded Verel in this test is nylon. In quality carpet constructions, Verel should give satisfactory wear life under all but the most severe conditions of wear and abuse.

Flame Resistance

As a result of the chemical modification made in Verel fiber, a high degree of flame resistance has been obtained. To evaluate this characteristic, the test for carpet flammability proposed by the ASTM Carpet Testing Committee was used. In this test a 7½ grain methenamine tablet is used to provide a flame source of approximately three minutes duration. The carpet is tested in a draft free location. The burned area and the self-extinguishing properties are taken as measures of carpet flammability. Even a loose construction cut pile Verel carpet did not propagate a flame when conditioned at 0% relative humidity and subjected to this test. Figure 10 shows loop pile and cut pile Verel carpets tested by this mehod.

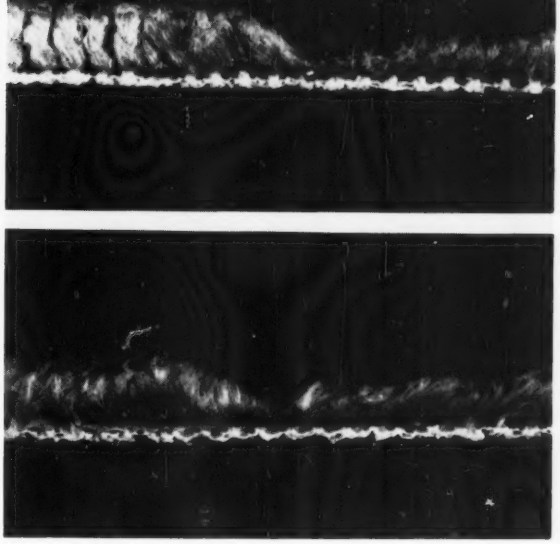


Fig. 9—Stair Step Abrasion Comparisons of Verel and Wool at 180,000 Steps.

Verel carpet fiber is not attacked by moths. This fact contributes to long carpet life and represents a significant advantage over wool. Extensive tests have shown that Verel is nonallergenic.

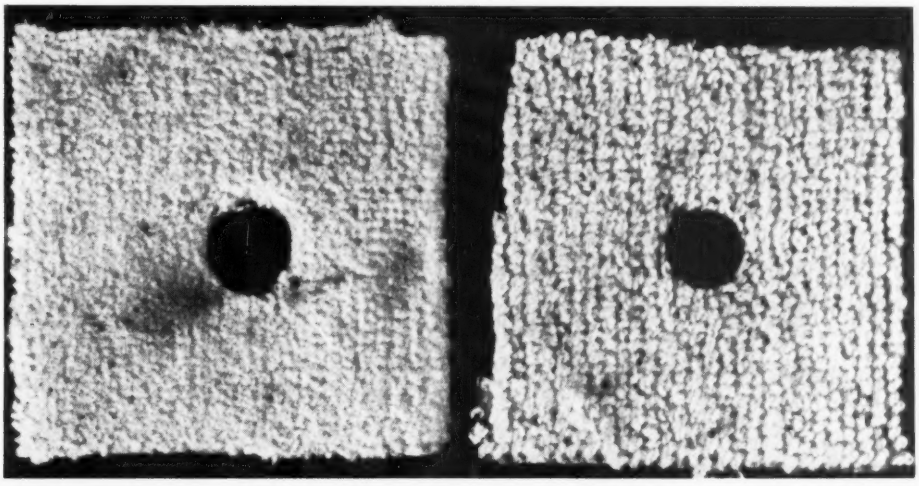
Carpet Consumer Appeal

Being a specially engineered synthetic carpet fiber, Verel possesses several important properties which assist the carpet manufacturer in creating carpets of outstanding customer appeal. Verel has excellent whiteness, making possible bright, clear colors. Where styling requires light pastel shades, they can readily be obtained. The whiteness factor is also important in styles such as tweeds which call for a component of undyed yarn.

Since Verel is available in both bright and dull lusters, the carpet stylist can select the appropriate blend of fibers to obtain maximum carpet appeal. Unlike some man-made fibers Verel has a warm, comfortable hand which contributes to its acceptance. A wide variety of styles and textures can be obtained

(Continued on Page 76)

Fig. 10—Methenamine Flame Test on Cut Pile and Loop Pile VerelCarpets.



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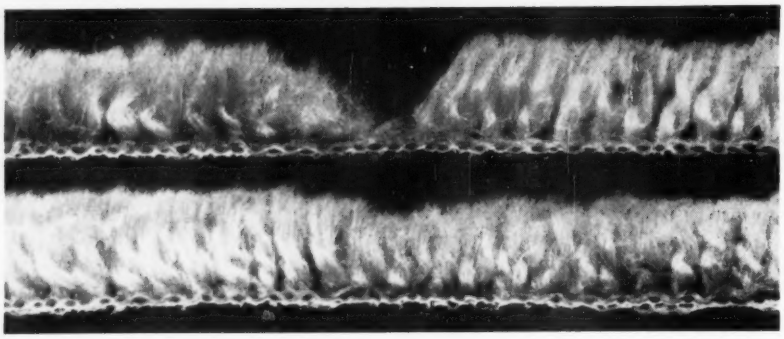

Here's visual proof of the added wear IRC nylon gives to carpeting made from acrylic fiber.

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NYLON'S EXPANDING FUTURE

With 20 years of broadening success behind it, nylon is expected to do even better in years to come

By George H. Braniff
Du Pont Co.

The year 1959 has been designated as the official 20th anniversary year for nylon. It was in January, 1939, 20 years ago this month, that ground was broken for the first commercial production plant. Formal announcement of nylon by the Du Pont Co. occurred on October 27, 1938, at the New York Herald Tribune's eighth annual forum on public affairs. Because of the news story by Stephen S. Marks which had appeared in the Daily News Record of July 18, 1938, and which had been followed by stories in other publications plus further publicity resulting from the issuance of patents in September, about the only new elements in the Du Pont October announcement was confirmation that we had a new polymeric fiber and that it had been named "nylon."

This new name has been the subject of considerable interest, and some misunderstanding over the years. Therefore, this might be an appropriate occasion to discuss the origin and status of the name.

At the outset, the word was declared generic. Du Pont never used it as a trade-mark in this country. Despite this fact, we still receive inquiries about its use as a U. S. trade-mark and now and then see the misstatement that it once was a trade-mark and the rights to it were lost.

The research program which led to nylon was initiated in 1928. Nylon was not a planned discovery. It resulted from a fundamental research study which had as its objective the development of basic information which would have general application in the chemical field.

The study was directed toward a better understanding of polymerization—how and why small molecules unite to form giant ones, such as those found in rubber and cellulose.

Fibers from the original polymers were not strong or elastic and they were softened by hot water, but they suggested that some related compound might produce fibers having desirable properties. Among numerous new super polymers studied, the type known as polyamides showed the most promise; hence it was in this area that possibility became reality.

The polymer made its commercial bow in toothbrush bristles. "Exton" was the trade-mark given to the material by the distributor of Dr. West's toothbrushes.

The first public sale of nylon stockings was in a few stores in Wilmington, Delaware, starting on October 24, 1939; and coast to coast sales were under way within seven months. Our fiber plant at Seaford, Delaware, went into operation December, 1939 and at long last the 11-year research project had reached full commercial stature. Considerable money had been invested in it, too. The first pound of yarn produced at Seaford, for example, represented an expenditure of some $27,000,000 in research and manufacturing facilities.

The inevitable embargo and freezing of silk, which came in 1941, caused a step-up in the military program on nylon. This program led to its widespread wartime use in rope for aerial pickup of gliders, the

Paper presented at the January 7th, 1959 meeting of the American Association for Textile Technology, Inc. at New York, N. Y.

Mr. Braniff joined the Du Pont Co. in 1933 after receiving his B.S. degree in chemical engineering from Iowa State College. After assignments in the research and production departments, he has served for the past ten years in the area of sales. He is manager of the nylon sales program section of the textile fibers department of the Du Pont Co.

George H. Braniff

APPEARANCES ARE DECEIVING—This evening gown of printed nylon chiffon looks delicate and fragile. Actually it possesses great strength in laundering and great tear-resistance.

wounded, even intelligence agents in enemy territory. It was woven into filters for blood plasma. It was the one cord that could withstand the tremendous shock punishment given the tires on huge bombers and high-speed fighter aircraft. It was put into tubing for many special applications, into shoe laces and fabric uppers for rot-resistant jungle boots. It went into jungle hammocks, netting, screening, ponchos, flying suits, half-shelters, litters for wounded, ropes and hawsers of every description, and several other high-poundage uses that have never been revealed.

Nylon was frozen for military uses by the War Production Board early in 1942. With that action civilian supplies were cut off and all nylon went for defense uses. During the period of civilian shortages, black market operators capitalized on the absence of nylon stockings. No end of gullible people fell into the trap of buying substitutes at outrageous prices. Numerous complaints were raised against Du Pont, the OPA, and the world at large. Many of these stockings were fine, highly finished rayon or mercerized cotton, but they were labeled, "Made of Du Pont Nylon", to the benefit of no one but the unscrupulous peddlers.

Garments of Parachute Cloth

Men's dress shirts appeared as early as May, 1944, at $6.95 retail. The price later went to $8.95 retail, but being made of war surplus fabrics which had been woven for any number of uses other than shirts, the results were far from satisfactory. This was an extremely trying period for nylon, and many of the black eyes suffered then have never healed.

Ninety per cent of our nylon production went to the hosiery industry for upwards of a year immediately after the war in an effort to meet the pressing demand. This provided only a stop-gap solution, for even greater supply problems were to develop over the next ten years.

Manufacturing processes were developed for a range of deniers meeting the critical quality standards for use in woven goods. Nylon in staple form was commercialized for use initially in socks, sweaters, and carpets and as a reinforcing fiber in blends with wool. A special development team spent a full year breaking bottlenecks in the use of nylon in tricot knitting. A heavy denier, high tenacity yarn for tires and a 15-denier monofilament yarn for hosiery were developed. As has been true throughout the history of nylon, these post-war years were characterized by the many valuable contributions made by various groups in the textile industry.

Probably no other development in the textile field has benefited to the extent of nylon from the efforts of our customers, intermediate processors, equipment manufacturers, chemical suppliers, and others who have continually directed their time and talent to the better utilization of nylon. For this, Du Pont will be everlastingly grateful.

The momentum provided by this joint effort created new markets for nylon and increased its use in the older fields. By the late 1940's, we found ourselves in a continual supply problem; this in spite of the fact that we had instituted eight major expansion programs for manufacturing facilities since the war.

When we looked at our troubles and added a modest estimate of what the future held it was realized that we had a far bigger responsibility than we felt could be handled by one company. In the face of our rapid expansion program, supply of the product was dropping further and further behind the demand. We needed more producers of the fiber. But finding someone willing to become a competitor was no easy task.

Today 12 Firms Make Nylon

The investment required for production facilities and the difficulties in building a high level research and development team were sufficient to eliminate a good many interested firms. Fortunately, there were companies who could see their way clear to meet this challenge so that today there are 12 producers of nylon fibers in the United States.

Virtually all experienced fabric technologists have been involved in the development of new concepts which have broadened the utilization of nylon. It has been such concepts as wash and wear, permanent pleating, new dyeing and finishing techniques, and new yarn forms which have kept the outlook for nylon bright.

Because of this healthy condition, there has been a continuing increase in the total production capacity of the several nylon producers. In the two-year period, 1957 and 1958, close to 100 million pounds of added capacity came into being. At present, productive capacity appears to be at least equal to demand although we still experience seasonal shortages. While it is too much to expect the 1957-1958 rate of production increase to carry on into the future, the opportunities for further expanding the uses of nylon are numerous.

While there are several factors which could have an adverse effect on the future business climate, one which affects most people is the proposed graduated tax on profits which would fix a sliding scale of in-

come. The present law provides a flat 52% tax rate on taxable corporate income over $25,000.

A proposal, introduced in Congress last year and likely to be reintroduced in the present session, would take three-fourths of the top-bracket corporate income in taxes. Should this proposal become law, it is obvious that investment in plants, which require large amounts of capital will be unattractive.

Throughout the history of nylon, progress has been so rapid that a yarn or fabric has often changed from a highly attractive to an inferior item within the period of one to two years. For example, few yarn counts or fabrics as they existed in 1946 would have been competitive against their 1948 counterparts, nor would the 1956 models compete favorably in today's market. This rate of progress is on the increase as the use of nylon becomes more widespread and as more and more business concerns have a stake in the nylon enterprise.

Better Looking Fabrics Coming

Space does not permit a review here of all areas wherein future product or market advances are likely. But let us take a look at some of the most promising. In the major market of wearing apparel we can look for significant changes in fabric appearance and handle. The limitations in this regard which have existed when using nylon filament yarns will be reduced and, in some cases, eliminated through changes in surface character of the individual filaments, use of textured yarns, and by new dyeing and finishing procedures.

One example of the new look is "tissue tricot" which owes its uniqueness to the Schreiner calendering it receives in finishing. Retail buyers of sleepwear, in a recent survey, listed the merits of the new fabric as opacity, softness, luxurious hand, and beauty of appearance—terms not often applied to nylon fabrics in the past.

Lending further incentive in the knitting field will be improved yarns and packages which make possible lower knitting costs, more uniform fabrics, and fewer seconds. The ever increasing range of deniers, with their variations of luster and denier per filament ratios, will permit greater flexibility in styling. The emphasis on styling will be particularly noticeable in ladies' hosiery. In this use, the success of toned hosiery has stimulated exploration of other possibilities that will assist in making hosiery more important as a fashion item.

More Uniform Dyeing

New, partially relaxed nylon yarns are now on the market; more will be coming along. These yarns provide more uniform delivery redraw tension from larger supply packages; they have more uniform dyeing characteristics; give better control of fabric width, and eliminate the long standing problem of pirn taper barre. The uniformity of woven goods will also be improved through new weaving and finishing procedures which are showing real promise in laboratory developments. These include use of dull yarn as filling with bright or semi-dull warps, loom settings to reduce fabric configuration nonuniformities, and the application of tension in the warp direction during fabric finishing.

Textured yarns represent a promising area of future growth for nylon. It has taken several years to reach the present level of interest, volume and activity. The apparent slow progress is not surprising when one considers the time element involved in developing texturing processes to give the desired amount of bulk or stretch for specific uses and the time-consuming merchandising task of establishing a new fabric concept. There are many texturing processes, one of which has been developed by Du Pont and licensed to the industry. Textured yarns made by licensees in accordance with Du Pont specifications may be designated by the trademark "Taslan".

The several commercial texturing processes provide a variety of yarn textures at price levels which permit wide utilization in textile markets. Textured yarns are upgrading fabrics made from filament yarns; are replacing spun yarns in some uses, and are opening the way for new style creations such as the popular leotards.

Perhaps a better idea of the importance of texturing to nylon can be gained by looking at the volume involved. It is estimated that some 30 to 40 million pounds of nylon were textured in 1958. There are many indications that point to a level of 100 million pounds in the next five to ten years.

New Textured Yarns

It seems appropriate here to say a few words about Du Pont's interest in the field of *producer* textured nylon yarns. For several years we have had an active research program on the study of yarn texturing. One of our long-term specific areas of interest for textured yarns has been in the field of carpets. This interest was created from a firm conviction of nylon's superiority as a carpet fiber and the knowledge that product limitations prevented the staple form of the fiber from realizing full market potential.

Our research teams studied many yarns and processes covering a wide range of yarn textures. Of particular importance was their study of the variables and the opportunities which exist in the combination of base yarn production and the texturing of that yarn. Out of these studies came a completely new discovery—a totally different nylon structure than we had ever seen before, a different arrangement of the molecules, and a new combination of yarn properties. We are seeking to obtain broad patent coverage on both process and product.

About a year ago our internal testing program had progressed to the point where it was evident that a

TRIAL OF STRENGTH—Nylon towropes have won widespread acceptance because they last longer, are easier to handle in marine uses than manila hawsers.

NYLON IN HOME FURNISHINGS—Here nylon carpet serves as a long-wearing, resilient background for an attractive room in which the chairs and sofa are covered with nylon upholstery fabrics.

unique textured yarn having excellent commercial potential had been developed.

Early in 1958 the evaluation program was expanded to include trade testing. Carpets made under commercial conditions from this yarn were shown in January at the International Home Furnishings Show in Chicago and are on sale in a limited number of retail stores this month.

The yarns for the mill-scale program are being produced in deniers of 1300 and 3700 and are identified as Du Pont Type 501 carpet nylon. These yarns require trade processing in the form of twisting, plying, heat-setting, etc., before use in the loom or tufting machine. This need for trade processing brings the yarn converter into the picture, thus providing this important segment of the industry with an opportunity to make styling contributions beyond the capabilities of the yarn producer.

Better Performance in Carpets

What do we know about this new discovery today? The manufacturing process lends itself to combining with existing nylon yarn producing equipment. The yarn has a new structure; dyes at a fast rate and to a deeper level; has moderately better resilience; has a good balance of properties, and exhibits a higher bulk in carpets than we have seen from any other nylon product.

The carpet market presented an opportunity wherein the sales of nylon could be expanded, and there also existed an opportunity to develop a unique product for this market—one which had not been developed through other lines of attack. These two factors made Du Pont's decision to produce the Type 501 textured yarn for carpets a simple one. As to our course in the future, no one can plot it with accuracy. The character of the products which evolve from our research; the nature of the technology required to produce the yarns; the competitive situation, along with customer and market considerations, obviously will influence our action.

What about the future of nylon staple in view of the promising outlook for our textured yarn? We look on textured yarn not as a replacement but as a partner of staple in expanding the use of nylon in carpets. We expect, therefore, to see an increase in the use of carpet staple. In addition, staple growth is forecast in the reinforcement of cotton and rayon fabrics where the increased durability provided by the nylon is desirable, and in certain industrial applications which are discussed below.

Nylon's use in industrial applications has lagged behind apparel uses, but has come along rapidly in recent years. Exploration of industrial markets did not get under way until the late 1940's. These applications dictate the need of a long prove-out period for a new product, particularly one which requires a higher initial investment. Consequently, it has taken several years for broad-scale demonstration and recognition of nylon's overall lower cost and superior performance in specific applications. In such uses as tires, cordage, sewing thread, coated fabrics, fish nets and lines, sails, felts, luggage, webbing and belting, superior properties have been demonstrated; satisfactory market penetration has been experienced, and significant growth in the use of nylon is forecast.

In other uses such as nonwoven structures, and the reinforcement of plastics, both involving staple fibers, considerable product development and market demonstration work will be required before large-scale usage can be expected. However, the market potential for nylon in these uses appears sufficiently attractive to warrant the present effort.

Nylon in Tires

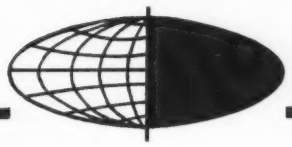
Currently more than one-third of all tires produced are made of nylon cord. For aircraft tires, nylon is used exclusively because of the critical performance requirements of this use. In other than aircraft tires, greatest pentration has been realized in replacement passenger tires and in truck, bus and off-the-road tires where tire construction and premium pricing opportunities permit nylon to compete on a favorable basis with rayon.

While further penetration in tires is occurring at existing price-to-performance relationships, the real asset for nylon is the number of opportunities which exist for the improvement of this relationship. These include yarns of improved physical properties which provide greater utility of the yarn in tires, better yarn and cord processing techniques, improved tire designs and full realization of the benefits of post-inflation. These advances will result in lower unit costs and better tire performance.

In cordage, real advances are being made in designing nylon yarn properties to meet end-use requirements. Present studies will lead to ropes having higher dry and wet strength, better performance under repeat loading, and improved resistance to heat degradation. Significant in these studies is the beneficial effect of lubricity within the yarn bundle. The performance characteristics of cordage are greatly improved when the restraint on the individual yarns to move within the rope structure is reduced. These advances, along with the known advantages of strength, abrasion resistance, and ease of handling add up to a bright future for the increased use of nylon in cordage.

In sum, it can be said that the future is bright for nylon in many end uses, and market expansion will continue as Du Pont and its fellow nylon producers, and persons in other areas of the textile industry keep looking for opportunities to further improve product and processing. Truly, the full versatility of the fiber has not been utilized, nor fully explored. ■

TEXTILE NEWS



World Wide

RUSSIA'S TEXTILE INDUSTRY seems headed for a vast production expansion—if reports coming from the recent 21st Communist Party Congress are true. Already one of the world's largest producers, and perhaps the greatest of wool and flax, Russia is planning to increase output of these textiles by 70 and 32%, respectively, by 1965. This would mean 580,000 metric tons of flax and 580,000 of wool.

USSR CONSUMER GOODS expert, A. N. Kosygin, told the Congress that Russia's entire textile industry capacity would jump by 50% between 1958 and 1965. Shortly before the Russian Congress got underway, Chatillon Artificial Fibres Co., of Milan, said that it would build a big rayon plant in Saratov, along the lower Volga River, 180 miles from Stalingrad. The plant would be built in 1961, at a cost of $40 million and have a 50-ton daily rayon viscose yarn capacity.

JAPANESE TEXTILE MEN are trying to shake off the effects of 1958, a year which saw production fall more than 10% and exports drop by 11%. Man-made fiber output was down even more than the industry average, 23%, due to the cut back in viscose yarn and staple. However, true man-made fiber output went up nearly 9½%, one of the few bright spots in last year's textile picture. Exports of silk fabrics also rose over 1957.

JAPAN'S BIG LABOR union, the National Textile Workers Union, which has nearly 350,000 members, is seeking a 20% general wage rise and a minimum salary comparable with other Japanese industries.

TOHO RAYON CO. plans to build a 10-ton per day acrylic fiber plant, with production due to start in about a year. A number of smaller rayon firms are also reported getting ready to begin to manufacture acrylic fibers.

BRITAIN'S AILING COTTON textile industry was given pretty much of a brush-off by Prime Minister Harold Macmillan a few weeks ago. "There must be considerable changes in the structure and character of the industry if it is to maintain its strength," Macmillan said, adding that "some of the new countries which were once our customers are now manufacturers themselves."

UK COTTON YARN PRICE fixing arrangements were undercut by a decision of Restrictive Practices Court. The Yarn Spinners' Association, the court said, set up a minimum price to tide it over periods of poor demand. However, the minimums tended to become general and prevented UK excess productive capacity from being eliminated. Stating that the industry ought to be made smaller and more compact, the court added: "We think it inevitable that in the near future a number of mills will have to close down."

A US AND UK GROUP have gotten together to manufacture chemicals for textile finishing. The US firm is Sun Chemical Corp. The British, Warwick Chemical (Yorkshire) Ltd., is a new firm in which Sun is said to have a 20% interest. The plant will be located at Bradford whose Dyers' Association is working closely with the US company.

COURTAULDS, LTD., HAS set up a new marketing system which will see overseas sales handled by Samuel Courtauld & Co. (Overseas) Ltd. The company in the last few months of 1958 spent an estimated three million sterling in diversification to include airplanes, shipping, paint, drug containers, steel drums, waxed cartons and steel tire cord.

GERMAN RAYON WEAKNESS was effective in lowering textile operations in 1958 to the worst level in some three years. The German Man-Made Fibers Association reported that cellulose-based filament output went down from 71,600 metric tons in 1957 to 64,000 in 1958, while staple fibers were off from 178,300 to 151,300 tons. Synthetic fiber output, however, rose 24%. The pressure of imports was said to have hurt German textiles—especially from semi-finished goods, some of which were destined for re-export. However, German Economics Minister Ludwig Erhard is understood to be opposed to curtailment of textile imports.

INDIA IS MAPPING an expansion in textile producing capacity. The State Trading Corp. revealed it has contracted with Japanese, Czechoslovakian and East German machinery manufacturers to supply it with the whole range of textile mill equipment, from winding and warping to weaving and finishing.

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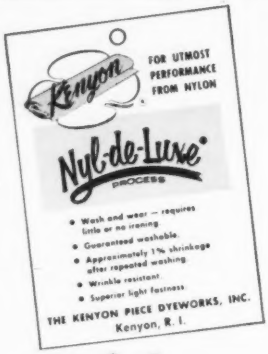

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TDI Brief on Labeling Law

A brief dealing with proposed rules for the enforcement of the new Textile Fiber Products Identification Act was submitted to the Federal Trade Commission recently by the counsel of the Textile Distributors Institute, Weil, Gotshal & Manges. The brief covered several points which relate to the responsibility of converters under the law. The principal points discussed were the following.

1. That the converter should not be responsible for testing of fiber content after finishing greige goods but should be permitted to rely upon the fiber content furnished by the mill pertaining to the greige goods.

2. That the converter should be entitled to rely upon a guarantee received from the mill covering the greige goods in issuing his guarantee in turn to his customers.

The other points included in the brief related to such matters as disclosure of fiber content on contracts as well as invoices, labeling of remnants and the use of certain generic names.

The Institute is hopeful that the FTC will give favorable consideration to these requests. It is expected that the proposed regulations will be issued this month and that public hearings will be held in March.

Maintenance of Selling Terms

A bulletin stressing the importance of maintaining selling terms by textile distributors was issued recently by the Textile Distributors Institute. The following is the text of the bulletin:

"The customary selling practices which have been in effect since the inception of O. P. A. and in the recommended form of finished goods contract which is being used in the man-made fiber textile market, are Net 10 days 60 days extra. As far as we know, these terms are consistent with the general practice throughout the cutting-up trade.

Furthermore, the existence of the present terms followed by members of our industry has promoted stability.

May we also remind you that if you do not extend uniform terms to all accounts of the same class, you may find yourself in violation of the Robinson-Patman Act.

The services of the Institute are available to any member to investigate any rumors which you may hear to the contrary."

Warning Against Contract Changes

A Bulletin cautioning members of the Textile Distributors Institute against alterations by buyers of the Institute's recommended finished goods contract was issued recently by Miss Hilda A. Wiedenfeld, executive secretary of the TDI. The text of the bulletin follows:

We understand that many customers of our members are issuing purchase orders to our members, which purchase orders contain terms completely different from those contained in the TDI recommended finished goods contract. For example, it has been brought to our attention that an important dress house has a purchase order form which contains warranties of the Seller (the finished goods distributor) stating that the finished goods is of first quality and suitable for manufacture "into high class garments, that the material will not shrink or stretch, nor will the color run or fade."

This particular purchase order also contains a clause that if any garments are returned to the Buyer "due to the failure of the material in any repect", the Seller will refund to its customer any amount allowed as a credit and that the Buyer is not required to sponge or examine any of the goods before cutting.

The purchase order also provides that the order can be forthwith cancelled if any merchandise is not delivered in strict accordance with delivery dates, quality, color, etc. or in the case of a strike interfering with the Buyer's production. It provides a different type of arbitration from that set forth in the TDI recommended finished goods contract and also contains the provision that all of the above mentioned terms and conditions of purchase "shall apply to all our future purchases from you unless otherwise agreed in writing."

The TDI recommended form of finished goods contract contains terms of sale which we believe are fair to the Buyer and to the Seller. Our counsel, Weil, Gotshal & Manges, advises that if a distributor accepts from a customer a signed purchase order of the type described above, and ships against such purchase order without first obtaining the signature of the Buyer on the distributor's finished goods contract, or at least mailing to the Buyer the Seller's finished goods contract with the added sentence quoted below, then the terms of the Buyer's purchase order would prevail and the distributor would be bound by all of such terms, no matter how harsh or unrealistic they may seem.

May we remind you that the finished goods contract provides:

> "This order embodying the terms on the face and on the reverse side hereof is hereby acknowledged to be correct by Buyer but it shall become a contract either when signed and delivered by Buyer to Seller, and accepted in writing by Seller or when Buyer or his agent has accepted delivery of the whole or any part of the goods herein described."

The safest procedure is for the Seller to see to it that the Buyer signs the Seller's finished goods contract before the Seller ships any goods. We point out again the importance of your reading all the provisions of any purchase order which you receive; if all the terms of such purchase order are not completely acceptable to you, then be certain of your position by making sure that the customer signs your finished goods contract before you ship any goods.

In order to make the terms of your finished goods

contract crystal clear to your customers, it is recommended that when re-ordering from the printer your form of finished goods contract, you add the following sentence at the end of the material on the face page of the contract (directly above the signatures):

> "It supercedes Buyer's manifold or purchase order and no modification of it shall be effective unless in writing signed by the parties."

Wullschleger Donates Rare Loom

Arthur E. Wullschleger, chairman of the board of Wullschleger & Co., Inc., recently presented to the Smithsonian Institute in Washington, D. C., a rare 18th century French handloom with a 19th century jacquard attachment. The loom is on display in the newly renovated Textile Hall in the Institute's Arts and Sciences Building.

Wullschleger with the help of friends found the loom in an attic in Lyon. Shipped to the United States last year, the loom was re-assembled at Wedgewood Mills, Jewett City, Conn. Robert Frick, retired technician of J. P. Stevens Co. supervised the project.

After six months of work, the loom produced its first cloth. The Wullschleger Coat of Arms was used as a pattern. A single repeat of 3 inches required 628 specially punched jacquard cards. A man can weave only 4 or 5-inches of material per day on this handloom.

The loom was disassembled in December and brought to the Smithsonian Institute where it again was put together by the men who had restored it in Connecticut. The loom and Jacquard attachment weigh nearly a ton; occupy 8 by 10-feet of floor space; and stand 12-feet high.

Wullschleger was accompanied to Washington for the presentation by Kalman Shapiro, president of Wedgwood Mills; Kurt Meyer, and Archie J. Gould, both vice presidents of Wedgwood who participated in the undertaking.

New Associate Member

Associate membership in the Textile Distributors Institute has been extended to Allied Chemical Corp., Fiber Sales and Service, 261 Madison Ave., New York 16, N. Y. George Hotte, director and R. E. Ellsworth, promotion and advertising manager will represent Allied.

ACMI Members Meet This Month

A mood of optimism and confidence in improved business in the future is expected to be evident at the 10th annual convention of the American Cotton Manufacturers Institute at Palm Beach, March 19 to 21. According to industry sources, two recent government actions are largely responsible for the optimism already prevalent throughout the industry which is expected to find expression at the Florida gathering.

The first was the recent approval by the Senate Interstate and Foreign Commerce Committee of the report of Senator Pastore's subcommittee. The Pastore report, the result of seven months' study and numerous hearings, recognized problems of the industry and recommended that quotas be imposed on imports from low-wage countries.

The second development which has greatly heartened the industry was the statement last month by the Office of Civil and Defense Mobilization that the textile industry was considered an essential industry and that any further shrinking of the industry's capacity would imperil the nation's mobilization potential.

These developments, sources close to ACMI leadership declare, give encouragement to textile manufacturers who have taken their problems to Washington with little success so far.

Although the detailed program for the convention had not been arranged when this issue went to press, it was known that Halbert M. Jones of Laurinburg, N. C., ACMI President, would deliver his annual address to the convention at the opening general session the afternoon of Thursday, March 19. Robert C. Jackson, ACMI executive vice president, will report at this session also. There will probably be a recognition of the activities of ACMI during the 10 years of its existence at this session.

The second general session will be held Friday morning, March 20, when there will probably be some talks on economics. The annual banquet will be held that night, with an entertainment program following.

There will be a main speaker, yet to be selected, for the closing session Saturday morning, when new officers will be elected and committee reports heard. James A. Chapman of Inman, S. C., president of Inman and Riverdale Mills, is expected to step up from first vice president to president of the organization and J. M. Cheatham of Griffin, Ga., president of Dundee Mills, Inc., will likely move from second to first vice president. Eight new directors also will be named, as well as a second vice president.

The ACMI Board of Directors will meet the afternoon of March 18, prior to the convention, and will hold a luncheon meeting at noon Saturday, March 21.

New Monofilament Fiber

A new filament yarn said to be a vinylidene chloride copolymer developed by Dow Chemical Co. is now being marketed in small quantities. Tradenamed "Rovana," the new filament was formerly known as Q-957. The yarn is a monofilament in the form of a flat film tape of uniform thickness. It is available in 300, 400 and 550 deniers in a range of ten colors including natural color.

Dow reports that household and industrial uses offer the greatest promise for the new monofilament. Another application recently revealed by Dow are wall covering fabrics of 100% Rovana embossed for decorative effects. *For further information write the editors.*

Bachenheimer Re-elected

Ralph J. Bachenheimer, Iselin-Jefferson Co., Inc., was re-elected chairman of the Textile Section of the New York Board of Trade at the annual meeting. William H. Dribben, Cone Mills, Inc., was elected vice chairman, and John M. Bendheim, M. Lowenstein & Sons, Inc., was named treasurer. The section, in the past year, has actively concerned itself with matters of importance to the textile industry, including the new labeling law, tariff regulations, nonwoven fabrics, and joint sponsorship, with the National Retail Merchants Association, of a seminar for merchandise managers covering the entire textile field.

James A. Chapman

(Continued from Page 22)

"Your son James" Cobb told him.

The elder Chapman starred at Cobb in amazement. "Oh, pshaw", he said, the nearest approach to violent language which he, as a good Presbyterian, ever permitted himself. Then without another word he swung around in his chair turning his back on Cobb and burying himself in some papers under the commodious lid of his roll top desk.

A few days later, however, running into James in the mill, he told him to try to hold things together until he was able to recruit a new superintendent.

The younger Chapman took over and for all intents and purposes ran the mill as superintendent. Some months later, on his 24th birthday, his father remarked to him casually, "Well, how does it feel to be superintendent?"

A Very Young Superintendent

It felt fine to be a 24-year old mill superintendent back in 1917, "Mr. Jim" recalls today looking back with some nostalgia to those bygone days when the textile industry and life in general was a lot simpler. "Prosperity," he says now, "covered up my mistakes, and the duties of mill superintendent were not really burdensome by today's standards. We produced in those days mostly 39 inch, 72 x 76 4¼ yard goods using just one warp and one filling. We had a one shift operation, and I took to raising chickens to keep myself occupied."

In the 1920's under Chapman's leadership, Inman expanded greatly going to automatic looms and two shift around-the-clock operation. In 1928, Inman took over the management and later acquired control of Riverdale Mills at Enoree, 40 miles away. After the death of his father in 1936, Chapman became president and treasurer of both mills which were joined by merger in 1954.

Today, after decades of growth and wise modernization, Inman and Riverdale Mills muster a total of some 100,000 spindles and 1900 looms. There are 1375 workers on their combined payrolls and sales in 1958 were about $16 million. Output, virtually all cotton, includes broadcloth waffle constructions, piques, speciality printcloths such as fabrics designed for the new Milliken Belfast finish, sateens, twills, sportswear and industrial fabrics—many for the auto industry.

The supervision of this substantial operation and the maintenance of the high quality standards which are one of the hallmarks of Inman and Riverdale requires a lot of hard, slogging painstaking work by James Chapman. He gives himself to this work with a self-effacing and sprightly enthusiasm which is his outstanding trait. A millman down to the marrow of his bones, "Mr. Jim" is at the mill every day, and keeps a sharp eye on quality by spot inspections of fabric in the cloth room.

For the 18 months ahead, of course, he accepts the fact that his duties as ACMI president will require him to be away from Inman a good deal of the time. He feels, however, that the task of close supervision of production, which he is convinced is essential to successful cloth manufacturing these days more than ever, will be well taken care of by his brother, Robert H. Chapman, and his two sons, James and Marshall, and the fine group of men in his organization all of whom are recognized as leaders in their different fields.

CHAPMAN ON THE JOB—The way to insure high quality cloth is to see for yourself, Chapman believes. Here he inspects fabric in Inman Mills' cloth room.

The plain truth of the matter is that Chapman, if he followed his personal inclinations only would much rather stay close to Inman and devote his energies to running the mill and working for the church and community activities which are so dear to him. But he recognizes, with his deep sense of obligation to the welfare of others, that the American textile industry needs the selfless leadership of seasoned broad-visioned millmen. He considers his election to the presidency of ACMI a call to a higher responsibility—the welfare of the entire American textile industry—and it is a call which his strong sense of public duty impells him to answer with all the ability and energies at his command.

Has Welfare of Others in Mind

This sense of obligation to help the welfare of others has been strong in him all his life It has prompted him to make many generous gifts to religious, educational and other worthy causes, and to do much work on behalf of the Presbyterian Church in South Carolina and Wofford College of which he served at trustee for 12 years.

It is this same sense of duty and philanthropy in himself and his family which led to the creation of the Inman and Riverdale Foundation into which each year five percent of the company's profits are paid. The Foundation provides funds to keep young people in college. Currently it is paying two-thirds of the tuition and other expenses of 11 young men studying textiles at Clemson College, and four young women at Winthrop College in Rock Hill, S. C.

In summing up the ethical principles which have guided his life, Chapman says that the true measure of achievement is not how much money a man makes or how much he succeeds in worldly affairs. The important thing, he believes, is to live so as to leave the world a better place for having been in it. This, he believes, one can do by being, as he has been, a good businessman—a man who labors to build and leave behind him a plant and business and reputation second to none. His close business associates, his coworkers in religious and community affairs, and those who know him throughout the textile industry will agree that James Chapman has lived according to those high principles in which he so firmly believes. ■

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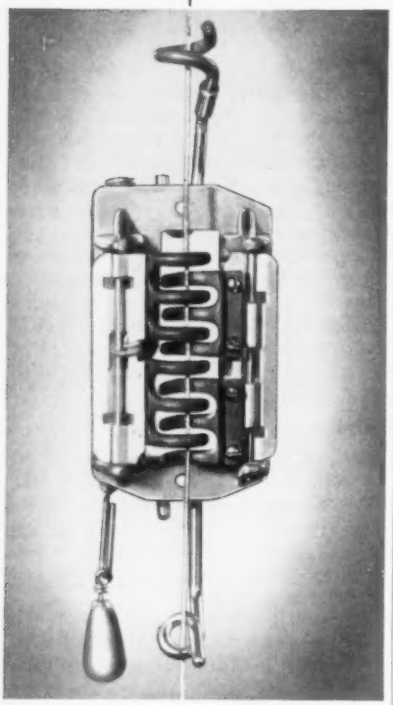

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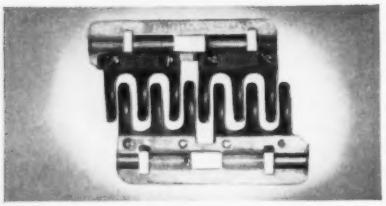

HEANY INDUSTRIAL CERAMIC CORP.
NEW HAVEN 3, CONNECTICUT

Lindly Booklet Offered

Lindly & Co., developer and producer of diversified devices and systems in photoelectric, infrared, optical electromechanical and electronic fields, has prepared a brochure describing the company's facilities and experience available for research and development. *For free copies write the editors.*

New Saco-Lowell Handbook

Saco-Lowell Shops, Inc., now has available for immediate distribution its new Handbook, Volume IV, Edition 5 of Engineering & Technical Data. The handbook contains 504 pages of technical information on textile manufacture, from opening through twisting. Copies are priced at $15 each, with a special price of $7 for students. *For copies write the editors making check payable to Saco-Lowell Shops.*

Buys Roberts Frames

Klopman Mills, Inc., a member of Burlington Industries has placed a contract with Roberts Co. for the purchase and installation of 17 Arrow WM-2 spinning frames, totaling 4,080 spindles, for its Ramseur Worsted Mills Corp. plant in Ramseur, N. C. Delivery of the new equipment will start in February.

Roberts also has initiated a foreign sales development program, with the establishment of wholly-owned subsidiaries in Mexico and Switzerland. The company also has begun a testing and research program at new facilities in Milan, Italy, on all phases of yarn manufacturing and fabric development.

Tensile Tester Bulletin

Scott Testers, Inc., makers of physical testing equipment since 1899, has published "CRE Tensile Tester Bulletin", a six-page illustrated brochure describing the new Scott constant-rate-of-extension tensile elongation tester, with ultra-precise electric weighing, for stress-strain evaluation of all materials in the range 0-.05 to 0-1,000 pounds or 0-25 grams to 0-500 kilograms tensile. *For free copies write the editors.*

Agilon Stretch Yarn

Deering Milliken Research Corp. has issued the latest revision of a booklet describing the advantages of using Agilon stretch yarn in seamless hosiery and giving detailed instructions for styling, knitting and finishing. The yarn is a non-torque yarn and can be knit on single carrier or multiple carrier knitting machines. *For copies of the booklet write the editors.*

cut production COSTS 4 ways! . . . with MECHO AIR GUIDER

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New England & Export Reps. The Standard Mill Supply Co. P. O. Box 1534 Providence 1, Rhode Island

U. S. MAN-MADE FIBER PRICES

This schedule lists the prices of yarns, staple and tow as reported by the producers in February 1959. All prices are given as subject to change without notice.

CELLULOSIC YARNS

ACETATE

American Viscose Corp.

Current Prices Effective December 21, 1956

Bright and Dull

• Intermediate Twist

Denier & Filaments	Cones & 4-6 Lb. Tubes	Twister Tubes	Warps	Spinning Cones	Twist Warps
55/14	$1.04	$1.02	$1.05	$.98	$.99
75/20	1.00	.98	1.01	.94	.95
100/28	.95	.93	.96	.89	.90
120/32	.86	.84	.87	.80	.81
150/41	.77	.76	.78	.72	.73
200/54	.73	.72	.74	.69	.70
300/80	.69	.68	.70	.65	.66

• Standard Twist 2¢ additional.

Terms: net 30 days.

Celanese Corp. of America

Current Prices

Effective December 20, 1956

Bright and Dull

Denier and Filaments	Intermediate Twist 4 & 6-Lb Cones	Intermediate Twist 4 & 6-Lb Beams	Intermediate Twist 4 & 6-TM Tubes	Intermediate Twist 4-Pound Cheeses	Spinning Twist Cones	Spinning Twist Beams	Spinning Twist O Twist Tubes
45/13	$1.17	$1.18	$	$	$	$1.12	$ ....
55/15	1.04	1.05	....	....	.98	.99	.925
75/20	1.00	1.01	.98	....	.94	.95	.84
75/50	1.02	1.03	1.00	....	....	.97	.89
100/26-40	.95	.96	.93	....	.89	.90	.81
120/40	.86	.87	.85	....	.80	.81	....
150/40	.77	.78	.77	.77	.72	.73	.69
200/52	.73	.74	.73	....	.69	.70	....
300/80	.69	.70	.69	....	.65	.66	.63
450/120	.67	.68	.67	....	.63	.64	....
600/160	.65	.66	.65	....	....	....	....
900/80-240	.63	.64	.63	....	....	....	.61

150 Denier 12-TM Tubes ..... .76
55/0/15 Dull Tricot Beams ..... .985
2-Pound Cheeses ..... .01 Less Than 4-Pound Cheeses
2-BU and 4-Bu Tubes ..... Same Price as 4 and 6-Lb. Cones
2-Lb. Twist Tubes ..... .01 Less Than 4 & 6-Lb. Twist Tubes on 120, 200 and 300 Denier Intermediate Twist

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A. east of the Mississippi River. Shipments west of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing.

Prices subject to change without notice.

All previous prices withdrawn.

• No transportation allowed (F.O.B. shipping point).

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

Celaperm Filament Yarn Prices

Denier and Filaments	Intermediate Twist 4 & 6-Lb. Cones	Intermediate Twist Beams	Spinning Twist Cones	Spinning Twist Beams
55/15	$1.37	$1.38	$1.31	$1.32
75/20	1.34	1.35	1.28	1.29
100/26	1.28	1.29	1.22	1.23
120/40	1.19	1.20	1.13	1.14
150/40	1.11	1.12	1.06	1.07
200/52	1.05	1.06	1.01	1.02
300/80	1.01	1.02	.97	.98
450/120	.99	1.00	.95	.96
600/160	.97	.98	....	....
900/80	.94	....	....	....

3 to 5 Turns on Cones or Beams — $.02 Additional

Celaperm Black Yarn Prices

Effective March 11, 1955

Denier and Filaments	4 & 6-Lb. Intermediate Twist Cones	4 & 6-Lb. Intermediate Twist Beams	Spinning Twist Cones	Spinning Twist Beams
55/15	$1.17	$1.18	$1.11	$1.12
75/20	1.14	1.15	1.08	1.09
100/26	1.08	1.09	1.02	1.03
120/40	.99	1.00	.93	.94
150/40	.91	.92	.86	.87
200/52	.85	.86	.81	.82
300/80	.81	.82	.77	.78
450/120	.79	.80	.75	.76
600/160	.77	.78	....	....
900/80	.74	....	....	....

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. East of Mississippi River. Transportation prepaid to any U.S.A. destination West of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our Acknowledgments of Orders.

Arnel Triacetate Yarn Prices

Bright & Dull

Effective August 19, 1958

Supersedes April 18, 1958

Denier and Filaments	Cones	Beams	Thick and Thin Cones
55/WKZ/15	$	$1.10	$ ....
55/2Z/15	1.26	1.27	....
75/WKZ/20	....	1.16	....
75/2Z/20	1.21	1.22	....
100/2Z/26	1.14	1.15	....
150/2Z/40	.95	.96	....
200/2Z/52	.92	.93	1.25
300/2Z/80	.87	.88	1.23
450/2Z/120	.86	.87	....
600/2Z/160	.85	.86	1.21

3 to 5 Turns on Cones or Beams—$.02 Additional

Premium for Black Arnel—$.25 Per Pound

Premium for Navy Arnel—$.37 Per Pound

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. East of Mississippi River. Transportation prepaid to any U.S.A. destination West of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our Acknowledgments of Orders.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Acetate

Denier & Filament	Zero Twist Tubes	Zero Twist Beams	Low Twist Cones	Low Twist Beams	Intermediate Twist 2 & 4 Lb. 5/8" Tbs.	Intermediate Twist 4 & 6 Lb. Tw. Tbs.	Intermediate Twist Cones	Intermediate Twist Bms.
45-13	$1.03	$1.11		$1.12				
55-18	.925	.985		.99			$1.04	$1.05
55-24	.925	.985		.99			1.04	1.05
75-24	.84	.94		.95		$.98	1.00	1.01
75-50				.97		1.00	1.02	1.03
100-32	.81	.89		.90		.93	.95	.96
120-50	.77	.80		.81		.85	.86	.87
150-40	.69	.72	.72	.73	.77	.77	.77	.78
200-60	.68		.69	.70	.73	.73	.73	.74
240-80			.67				.71	
300-80	.63	.65	.65	.66	.69	.69	.69	.70
450-120	.63		.63	.64	.67	.67	.67	.68
600-160					.65		.65	.66
900-44					.63		.63	.64
900-240					.63		.63	.64
1800-88					.61		.61	.62
2700-132					.61		.61	.62
3000-210					.61			.62

(A) Regular Twist (2.9 and 5 T.P.I.)—add $.02 to Intermediate Twist Price.

(B) 1 lb. 5/8" Tubes—add $.02 to 2 & 4 lb. 5/8" Tube Price.

Color-Sealed

Denier & Filament	Zero Twist Tubes	Zero Twist Beams	Low Twist Cones	Low Twist Beams	Intermediate Twist Twisted Tubes 2 Lb.	Intermediate Twist Twisted Tubes 4 & 6 Lb.	Intermediate Twist Cones	Intermediate Twist Beams
55-18	$1.245	$1.315		$1.32	$1.35	$1.35	$1.37	$1.38
75-24	1.18	1.28		1.29	1.32	1.32	1.34	1.35
100-32	1.14			1.23	1.26	1.26	1.28	1.29
150-40	1.03	1.06	1.06	1.07	1.10	1.11	1.11	1.12
200-64	1.00		1.01	1.02	1.04	1.05	1.05	1.06
300-80	.95	.97	.97	.98	1.00	1.01	1.01	1.02

(A) Regular Twist—Add $.02 to Intermediate Twist Price.

Black

Denier & Filament	Zero Twist Tubes	Zero Twist Beams	Low Twist Cones	Low Twist Beams	Intermediate Twist 2 & 4 Lb. 5/8" Tbs.	Intermediate Twist 4 & 6 Lb. Tw. Tbs.	Intermediate Twist Cones	Intermediate Twist Beams
55-18	$1.045	$1.115		$1.12		$1.15	$1.17	$1.18
75-24	.98	1.08		1.09		1.12	1.14	1.15
100-32	.94			1.03		1.06	1.08	1.09
150-40	.83	.86	.86	.87		.91	.91	.92
200-60	.80		.81	.82		.85	.85	.86
300-80	.75	.77	.77	.78	.81	.81	.81	.82
450-120			.75	.76	.79	.79	.79	.80
600-160			.73	.74	.77	.77	.77	.78
900-240			.73	.74	.74	.74	.74	.75

(A) Regular Twist (2.9 and 5 T.P.I.)—add $.02 to Int. Twist Price.

(B) 1 lb. 5/8" Tubes—add $.02 to 2 & 4 lb. 5/8" Tube Price.

Specialty Yarns

Type 20 Same Price as Regular Yarn

Type C Same Price as Regular Yarn

Thick & Thin

Denier & Filament	Natural Cones	Natural Beams	Black Cones	Black Beams	Color-Sealed Cones	Color-Sealed Beams
200-64 Int. Twist	1.05		$1.15		$1.35	
200-64 Reg. Twist	1.08	$1.09	1.17	$1.21		

Terms: Net 30 days. Subject to change without notice.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective December 21, 1956

"Estron"* Yarn, Bright or Dull — White

Denier & Filament	Regular Twist Cones	Intermediate Twist Cones	Intermediate Twist Tubes	Intermediate Twist Beams	Low Twist Cones	Low Twist Beams	Zero Twist Tubes	Tricot Beams Spun Twist	Tricot Beams Zero Twist
55/13	$1.06	$1.04	$1.02	$1.05	$.98	$.99	$.92½	$.99	$.98½
75/19	1.02	1.00	.98	1.01	.94	.95	.84	.95	....
75/49	1.04	1.02	....	1.03	....	....	....	....	....
100/25	.97	.95	.93	.96	.89	.90	.81	....	....
120/30	.88	.86	.84	.87	.80	.81	....	....	....
150/38	.79	.77	....	.78	.72	.73	.69	....	....
200/50	.75	.73	....	.74	.69	.70	....	....	....
300/75	.71	.69	....	.70	.65	.66	.63	....	....
450/114	.69	.67	....	.68	.63	.64	....	....	....
600/156	.67	.65	....	.66	.62	.63	.63	....	....
900/230	.65	.63	....	.64	....	....	.61	....	....
Heavier	....	....	....	....	....	....	.56	....	....

Current Prices—December 19, 1955

"Chromspun"*—Standard Colors (Except Black)

Denier & Filament	Regular Twist Cones	Regular Twist Beams	Intermediate Twist Cones	Intermediate Twist Beams	Low Twist Cones	Low Twist Beams
55/13	$1.39	$1.40	$1.37	$1.38	$1.31	$1.32
75/19	1.36	1.37	1.34	1.35	1.28	1.29
100/25	1.30	1.31	1.28	1.29	1.22	1.23
150/38	....	....	1.11	1.12	1.06	1.07
300/75	....	....	1.01	1.02	.97	.98
450/114	....	....	.99	1.00	.95	.96
900/230	....	....	.94	.95	....	....

Current Prices

"Chromspun"*—Black

Denier & Filament	Regular Twist Cones	Intermediate Twist Cones	Intermediate Twist Beams	Low Twist & Spun Twist Beams
55/13	$1.19	$1.17	$1.18	$1.12
75/19	1.16	1.14	1.15	1.09
100/25	1.10	1.08	1.09	1.03
150/38	.93	.91	.92	.87
200/50	.87	.85	.86	.82
300/75	.83	.81	.82	.78
450/114	.81	.79	.80	.76
900/230	.76	.74	.75	....

Prices are subject to change without notice.

Prices on special items quoted on request.

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in the United States east of Mississippi River. Seller reserves right to select route and method of shipment. If Buyer requests and Seller agrees to a route or method involving higher than lowest rate Buyer shall pay the excess of transportation cost and tax.

* "Estron" and "Chromspun" are trade-marks of the Eastman Kodak Co.

RAYON

American Bemberg

Current Prices

Regular Production Reel Spun Yarn

Den/Fil	No Turn Skeins	Turned* Skeins & Cones	High Turn Skeins & Cones 8½ Turns	12 Turns	15 Turns	18 Turns
40/30	$1.49	$1.95	....	....	....	$2.08
50/36	1.24	1.50	....	....	....	1.80
65/45	1.14	1.30	....	$1.53	....	1.58
75/60**	1.04	1.18	....	1.41	$1.46	1.49
100/74**	.95	1.08	....	1.33	1.38	1.44
125/60	.94	1.05	$1.09	1.30	....	....
150/120	.93	1.02	1.12	1.27	....	....
300/225	....	.95	....	....	1.08	....
900/372	....	.85	....	....	....	....
1800/744	....	.85	....	....	....	....

* Turn includes twists up to 6 turns on 40 and 50 denier, and up to 5 turns on heavier deniers.

** Spun Dyed Cupracolor Black 15¢ per lb. extra.

"44" HH Spool Spun Yarn

Den/Fil	No Turn Tubes	No Turn Beams	5 Turn Beams	5 Turn Cones	12 Turn Beams	12 Turn Cones	15 Turn Cones
40/30	$1.35	$1.35	....	....	....	....	....
50/36	1.00	1.00	....	....	....	....	....
65/45	1.05	....	....	....	....	$1.42	....
75/45*	.97	....	$1.08	$1.08	$1.31	1.31	$1.39
100/60*	.89	....	1.03	1.03	1.23	1.23	1.31
125/60	.84	....	.99	.99	....	....	....
150/90*	.77	....	.81	.81	1.15	1.15	1.24
150/120	.81	....	....	.93	....	....	....

* Available also in Spun Dyed Cupracolor Black at 15¢ per lb. extra.

"44" HH "Parfe" (Type 51) Spool Spun Yarn

Den/Fil	No Turn Cones	5 Turn Cones	5 Turn Beams	12 Turn Cones	15 Turn Cones
50/36	$1.60	$1.85	$1.85	....	....
75/45	1.45	1.55	1.55	$1.75	$1.85
100/60	1.35	1.45	1.45	1.65	1.75
150/90	1.18	1.25	1.25	1.60	1.70
300/120	1.18	1.25	....	....	....

Nub-Lite (Short Nubbi)

Code	Den/Fil	2½ Turn Natural Cones	2½ Turn Cones*	5 Turn Natural Cones	5 Turn Cones*
1515	160/90	....	....	$1.45	$1.35
1519**	155/90	....	....	1.45	1.35
2008	200/120	....	....	1.06	.96
3002	315/180	$1.10	$1.00	....	....
4011	410/224	1.10	1.00	....	....
6001	600/360	1.08	.98	....	....
8001	860/450	1.08	.98	....	....

* Basic price for cones when dyed. Dyed Colors 30 and 35 cents above basic price. Prices based on 200 lb. dyed lots only. Prices for natural yarn skeins same as natural cone prices.

** Code 1515 can be run in warp or filling.

CUPIONI Type B

Code	Den/Fil	2½ Turn Cones
9650	70/45	$1.64
9660	100/60	1.48
1545	150/90	1.25
9730	285/135	1.10
9792	450/225	1.10
9814	600/372	1.07
9837	940/372	.97

"Spun Dyed Cupracolor is spun 150, 285, and 940 deniers at 35¢ per pound extra. Cupracolor Black Comes in all deniers."

STRATA SLUB

Code	Den/Fil	Turned Cones	Price
9747	275/225	3½	1.20
9798	450/372	2½	1.10
9823	600/372	2½	1.05
9847	960/372	2½	.97
9885	1290/372	1½	.95
9934	2680/744	1½	.95

"Spun Dyed Cupracolor is spun in 600 and 960 deniers at 35¢ per pound extra."

FLAIKONA

Code	Den/Fil	Turned Cones	Price
9669	150/148	2½	$1.35
9769	300/224	2½	1.25
9782	450/270	2½	1.05
9807	600/405	2½	1.05
9840	900/450	2½	1.00
9924	2000/744	2½	.95

"Spun Dyed Cupracolor Black 35¢ per pound extra."

Terms: Net 30 days, F. O. B. shipping point. Minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight allowed to Memphis, Tennessee. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold F. O. B. delivery point.

American Enka Corp.

Current Prices

Effective July 25, 1958

Standard Quality Yarns

Standard Quality Rayon Yarns

NATURAL

Den./Fil.	Luster	Turns	Weaving Skeins Cones	Weaving Skeins Beams	Knitting Skeins Long	Knitting Skeins Short	Knitting Skeins Cakes	Knitting Cones	Tubes
50/18	E	5 S						1.56	
50/20	B	2.5 S					1.45		
75/10	B	3 S&Z					.95		
75/18	E	4 S						1.07	
75/30	B	2.5,4S&Z	1.07	1.07	1.15	1.19	.95		
75/30	B	8 S	1.17		1.32	1.37		1.17	1.22
75/45	P,E	2.5, 4,5S&Z	1.07	1.07	1.15	1.19	.95	1.07	
75/60	B,P	3,4 Z	1.09				.97		
100/14	B	3 S&Z				1.03	.83		
100/40	B,E	12 S						1.22	
100/40	B,P,E	4,5 S&Z					.83	.91	
100/40	B	6 S	1.10		1.19	1.24	1.02		
100/40	B,P	2.5,4S&Z	.91	.91	1.00	1.03	.83		
100/60	B	4 S&Z					.83		
100/60	E	2.5 S	.93	.93			.85		
125/40	E	3 Z					.80	.83	
150/40	B,P,E	2.1,3S&Z	.76	.76	.85	.87	.72	.76	
150/40	B,E	5 S&Z	.84	.84	1.04	1.09	.80		
150/40	B,P,E	8 S&Z	.89	.89	1.09	1.14	.85		
150/90	E	2.1 S&Z	.77	.77			.73		.82
200/40	P	3 Z	.75	.75	.84	.86	.71	.75	
200/40	B	5 S				.95	.88		
250/60	P,E	2.4 Z			.83	.85		.74	
300/30	E	3 S	.75	.79					
300/50	B,E	3 S	.70	.70					
300/60,120	B,P,E	2.1 S&Z	.67	.67	.73	.75	.65	.67	
300/60	B	3.5 S	.67	.67	.73	.75	.65		
300/60	B	7 S	.80			.83			
300/40,120H.T.	B	2.5, 3,4S	.69	.69			.67		
450/80	B,E	3 S	.63	.65	.70	.72	.61		
600/80	B,E	3 S	.65	.67			.63		
600/120	B	3 S	.63	.65			.61		
900/120	B	3.4 S	.63	.65	.70	.72	.61		
900/120H.T.	B	3.6 S	.65	.65			.63		

B—Briglo P—Perlglo (Semi-Dull)
E—Englo (Dull) H.T.—High Tenacity

Jetspun® (Colored Yarns)

Den./Fil.	Tenacity	Turns	Weaving Cones	Beams	Colors
100/40	Regular	2.5S	$1.28	$1.28	All
150/40	Regular	2.1S	1.11	1.11	All
200/40	Regular	8.3S	1.22	1.22	All
300/120	Regular	2.1S	1.03	1.03	All
450/80	Regular	3.0S	.99	.99	All
300/40	High	3.4S	1.05	1.05	All
600/80	High	3.4S	1.01	1.01	All
900/120	High	3.4S	1.00	1.00	All

® Registered Trade Mark for American Enka Solution dyed rayon yarn.

Filling Magazine

(Continued from Page 36)

made the application yet, the conveyor and packing device can be readily adapted to the Whitin Speed-Matic winder.

Whitin has also developed the attachment for winding the tip end bunch on both the Whitin-Schweiter "MS" and Fill-Master winders. The nose end bunch attachment can be readily applied as a changeover to these machines.

Terrell Machine Co. reports that the Schlafhorst Servoloom Autocopser is equipped to do a precision winding job on the body of the bobbin, the secondary bunch on the front taper of the bobbin, and on the tip bunch for the Draper attachment. Tension for the tip bunch is separately controlled and the tip bunch is accurately positioned. The yarn end is brushed into the tip bunch for safety as the bobbin goes through the magazine and into the transfer device on the loom. All bobbins coming from the Autocopser, of course, are full bobbins—no pieces.

To preserve the full flexibility and low space requirements of the standard Autocopser, the Servoloom Autocopser will now build the secondary and tip bunches under close control on each individual winding head. Also, it will load the Draper magazines at each individual winding head.

A signal light at each head, combined with a reserve supply of bobbins, will permit doffing a full magazine anytime after the last magazine compartment is half full, eliminating spindle stops while a full magazine awaits doffing. With this flexibility, Terrell points out, the problem of frequent yarn changes is no burden because a new dial setting on the tension device normally is the only change required on the Autocopser.

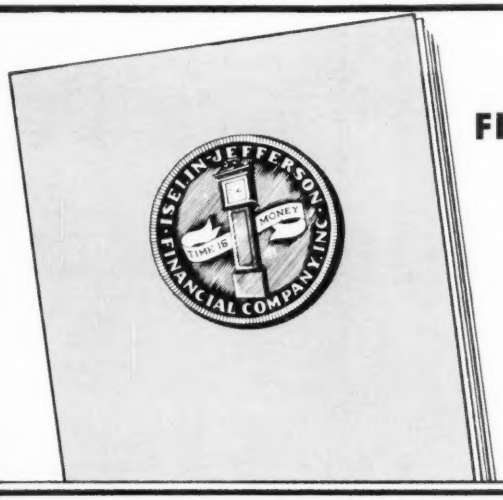
Even these changes will be held to a minimum because, with each spindle able to run a different yarn, looms and filling spindles can be balanced out. Therefore the only yarn changes affecting the Autocopser will be those required by style changes at the looms.

Terrell feels that carrying the advantages of the standard Autocopser into the field of the Draper automatic filling magazine will result in lower direct cost, and the high quality of the filling will be reflected in more efficient loom operation and higher quality cloth.

Terrell makes the further point that, since every mill operates under unique conditions, Terrell prefers to test the mill's yarn on the mill's quills to get an accurate picture of running conditions and weaving requirements. It can thus make an evaluation which will show the mill its exact quilling requirements in number of spindles, spindle assignments and direct and indirect labor.

Yeomans Textile Machinery Co. has adapted its Scharer fully automatic filling winder to the Draper magazine. The winder makes the tip bunch automatically. When the first magazine is completely filled, it automatically rolls onto a lifting device and the next magazine moves into place. The full magazine is automatically lifted to carrying height so that it may be slid off the rack and carried away without having to be lifted from the floor by the operator.

(Continued on Page 69)



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Southern Correspondent
SOUTHEASTERN FACTORS CORPORATION
Charlotte 1, North Carolina

TIME IS MONEY

Write for free booklet: "Time Is Money"

Skyloft (Lofted Rayon Filament Yarns)
Natural and Jetspun®

Denier	Denier per Filament	Twist	Cones or Tubes Natural	Black	Other Colors
1000	7.5	3.5S	$.79	$1.14	$1.14
2200	15	3.5S&Z	.67	.77	.84
2700	15	3.5S&Z	.62	.75	.82
4300	8	3.0S&Z	.64	.74	.81
5300	15	3.0S&Z	.65	.75	.82

American Viscose Corp.

Effective July 24, 1958

Graded Yarns

Denier	Filament	Type	Short Skeins	Long Skeins	Cones Tubes	Beams Spools	Cakes
		Regular Turns					
50	20	Bright & Dull	$	$1.59	$1.56	$1.56	$1.45
60	10	Bright	....	....	1.41	....	1.30
75	10-30	Bright	1.19	1.15	1.07	1.07	.95
75	30	Dull	....	....	1.07	1.07	.95
100	14-40	Bright	1.03	1.00	.91	.91	.83
100	60	Dull	....	....	.93	.93	.85
150	24-40	Bright	.87	.85	.76	.76	.72
150	40	Semi-Dull	.87	.85	.76	.76	.72
150	40	Dull	....	....	.76	.76	.72
150	90	Dull	....	....	.77	....	.73
200	10-44	Bright	.86	.84	.75	.75	.71
250	60	Semi-Dull & Dull	.85	.83	.74	.74	.71
300	15	Bright	....	.76	.72	.72	....
300	30	Dull Flat Filament	....	....	....	.79	....
300	44	Bright & Dull	.75	.73	.67	.67	.65
300	234	Dull	....	....	.77	....	.75
450	100	Bright	....	.70	.63	.65	.61
600	100	Bright & Dull	....	.70	.63	.65	.61
900	50-60-100-150	Bright	....	.70	.63	.65	.61
1200	75	Bright	....	.70	.63	.65	....
2700	150	Bright	....	.70	.63	.65	....
		Extra Turns Per Inch					
75	30	Bright 6-Turns	$1.37	$1.32	$1.17	$1.17	$
100	40	Bright 6-Turns	1.24	1.19	1.10	1.10	1.02
150	40	Bright 6-Turns	1.09	1.04	.84	.84	.82
200	44	Bright 6-Turns	....	.95	.90	.90	....
300	15	Bright 5-Turns	....	....	.80	.80	....
300	44	Bright 4.3-Turns	....	....	.70	....	.68
300	44	Bright 6-Turns	.83	.81	.80	.80	.78
300	120	Rayflex 6-Turns	....	....	.87	.87	....
600	30	Bright 5-Turns	....	.78	.76	.76	.74
		Rayflex Yarns					
75	30	Rayflex	$	$	$1.15	$1.15	$1.06
100	40	Rayflex	....	....	1.00	1.00	.92
150	40-60	Rayflex	....	....	.79	.79	.75
200	75	Rayflex	....	....	.78	.78	.74
300	60-120	Rayflex	....	....	.69	.69	.67
450	120	Rayflex	....	....	.65	.65	.63
600	234	Rayflex	....	....	.65	.65	.63
900	350	Rayflex	....	.72	.65	.65	.63
		Thick & Thin Yarns					
150	40-90	Bright & Dull	$	$	$1.15	$	$ ....
200	75	Bright & Dull	....	....	1.05	....	....
300	120	Bright & Dull	....	....	.95	....	....
450	100	Bright & Dull	....	....	.89	....	....
490	120	Bright & Dull	....	....	.95	....	....
900	350	Dull	....	....	1.00	....	....
920	120	Bright & Dull	....	....	1.00	....	....

Colorspun Yarns

Denier	Type	Cones/Tubes Beams/Spools
75	Regular Strength	$1.60
100	Regular Strength	1.28
150	Regular Strength	1.11
200	Regular Strength	1.08
300	Regular Strength	1.03
450	Regular Strength	.99
600	Regular Strength	.99
900	Regular Strength	.99
300	High Strength	1.05
900	High Strength	1.00
300	Regular Strength 5-Turns	1.13

Avicron Yarns

Denier	Filament	Cones/Tubes Beams/Spools
1800	100-200 Singles & 2 Ply	$ .68
2700	150-300-980 Singles & 2 Ply	.65

Viscose Filament Yarns

The following material deposit charges are required:

Metal Section Beams	$170.00 each
Metal Section Beam Racks	75.00 each
Metal Tricot Spools—14" flange	30.00 each
21" flange	60.00 each
32" flange	150.00 each
Metal Tricot Spool Racks—14" flange	135.00 each
21" flange	100.00 each
32" flange	75.00 each
Wooden Tricot Spool Crates	20.00 each
Cloth Cake Covers	.05 each

Same to be credited upon return in good condition—freight collect.

Celanese Corp. of America

Current Prices

Effective July 24, 1958

Viscose Rayon Filament Yarn Prices
Bright and Dull

Denier/Fil./Twist		Beams	Cones	Cakes
75/30/3			1.03	.91
100/40/2Z		.90		
100/40/3			.89	.81
100/40/5			.95	.85
100/60/2Z			.89	
100/60/3			.91	.83
125/40/2Z		.86		
125/40/3			.87	.78
150/40/0	NS		.68½	
150/40/2Z	NS	.75		
150/40/3			.73½	.70
150/40/5			.84	.82
150/40/8			.90	.88
150/90/0	NS		.71½	
250/60/0			.68	
250/60/3			.74	.71
300/50/0	NS		.64	
300/50/2Z	NS	.66		
300/50/3			.64½	.63
450/120/0	NS		.61	

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A. east of the Mississippi River. Shipments west of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing.

Prices subject to change without notice.

All previous prices withdrawn.

* No transportation allowed (F.O.B. shipping point).

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Effective with orders July 25, 1958

Bright and Dull

Den.	Fil.	Turns/ Inch Up to		Cones (A) Beams	Tubes	Cakes
40	20	3	Textile "Cordora"*		$1.90	$1.85
50	20	3			1.63	
50	20	3	Textile "Cordura"		1.65	1.60
50	35	3	Textile "Cordura"		1.70	
75	10	3	Bright			.95
75	30	3		1.07	1.07	.95
100	15	3	Bright			.83
100	40	3	Bright	.91	.91	.83
100	60	3	Dull		.93	.85
125	50	3		.89	.89	.80
150	40	3		.76	.76	.72
150	60	3	Bright	.76	.76	
150	60	3	Textile "Cordura"		.815	.785
150	90	3	Dull		.77	
150	100	3	Dull		.77	
300	50	2.5		.67	.67	.65
300	120	3	Textile "Cordura"	.68	.68	.66
450	72	3		.65	.63	.61
600	96	3	Bright	.65	.63	.61
600	240	3	Textile "Cordura"	.66	.64	
900	50	3	Bright	.65	.63	.61
900	144	3	Bright	.65	.63	.61
1165	480	3	Textile "Cordura"	.66	.64	.62
1800	100	3	Bright		.63	
2700	150	3	Bright	.65	.63	
			Thick and Thin			
100	40	3	#7 Bright		1.38	
150	90	3	#7 Bright		1.05	
200	80	3	#7 Bright		1.05	
450	100	3	#7 Bright		.89	
1100	240	3	#60 Bright		1.00	
2200	480	3	#60 Bright		.95	
			Monofils			
150	1	3	Bright	1.35	1.35	
300	1	3	Bright	1.15	1.10	
600	1	3	Bright		1.00	
			Plush			
300	30	3	Dull	.79	.75	

(A) 2¢/lb. additional for cones less than 3#.

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

* "CORDURA" and "SUPER CORDURA" are Du Pont's registered trade-marks for its high tenacity rayon yarn.

Industrial Rayon Corp.

Effective July 29, 1958

Continuous Process Textile Yarns

Denier	Filament	Turns per In.	Type	2.8 Lb Cones	4.4 Lb Cones and Tubes	Beams	2.2 Lb Tubes
150	40	2.5 "S"	Bright	.76		.76	
150	40	2.5 "S"	Luster #4	.77		.77	
150	40	2.5 "S"	Bright Intermediate strength	.77			
200	20	2.5 "S"	Bright	.75			
300	44	2.5 "S"	Bright	.67		.67	
450	60	2.0 "S"	Bright		.63	.63	

GIVES NEW WINGS TO TRAVELERS

*ANTI-WEDGE Spinning Ring permits maximum results using elliptical travelers.

Unique design keeps travelers from wedging yarn at increased speeds.

NOW IN MORE THAN 60 MILLS

*U.S. Patent No. 2,857,732

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ALLENTOWN BOBBIN WORKS, INC.
ALLENTOWN PENNSYLVANIA

The Laurel Leaf

BUSINESS MAGAZINE EDITION

LAURAVEL SC

A versatile softener for finer finishing of all types of yarns and fabrics.

If you are looking for a softener just a "little better than the rest," you should know about LAURAVEL SC, a nonionic softener recommended for the fine finishing of all types of yarns and fabrics . . . especially cotton goods. It's available as a soft liquid paste that's readily dispersable in hot water. It bestows full-bodied softness to fabrics, resists aging, and will not alter shades nor yellow whites.

Much of LAURAVEL SC's wide popularity results from its high resistance to salts, acids, and alkalies. It is stable in salt, Epsom Salt, and acid-chrome finishing baths, and may—under certain conditions—be used in the presence of 1% to 2% solutions of salt, making it ideal for softening many direct colors where a salt color fixative is used.

LAURAVEL SC is more compatible than many of its anionic counterparts with other finishing agents, such as resins and dextrines. Fabrics finished with it show excellent resistance to scorching. Used as a top softener in resin-treated goods, it is stable to residual products in the goods. It gives a superior lubrication to improve sewing and cutting properties, and adds good napping characteristics to fabrics. It gives a hand far less limp and raggy when used as a replacement for many conventional oils and softeners in compressive shrinking processes.

It's really easy to prepare and apply LAURAVEL SC—just mix with hot water and add to the last rinse. For finishing mixes, it may be added directly to the batch and boiled up with the rest of the ingredients. And, you can apply it with virtually any type of equipment.

Write for a generous free sample and *see for yourself* what excellent results you'll obtain!

Laurel Brand 50 YEARS OF SERVICE TO INDUSTRY 1909-1959

Laurel SOAP MANUFACTURING CO., INC.
TIOGA, THOMPSON & ALMOND STS., PHILA. 34, PA.

Warehouses: Paterson, N.J. Chattanooga, Tenn. Charlotte, N.C. Greenville, S.C.

600	90	1.5 "S"	Bright	.63	.63	.63
900	50	2.0 "S"	Bright	.63	.63	.63
900	150	1.5 "S"	Bright	.63	.63	.63
1100	480	2.0 "Z"	Bright extra strong	.65	.65	.65

Lustre #4 is semi-dull.

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges prepaid with transportation allowed at lowest published rate to all points east of the Mississippi River.

Prices are subject to change without notice.

Strawn Yarns

Denier	Filament	Turns Per In.	Type	4.4 lb. Cones
450	1	0	Bright and Dull	1.00
450	1	2	Bright and Dull	1.00
1250	1	0	Bright and Dull	1.00
1250	1	2	Bright and Dull	1.00

Tubes— 5¢ per pound over cone prices.

Skeins—10¢ per pound over cone prices.

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges prepaid with transportation allowed at lowest published rate to all points east of the Mississippi River.

Prices are subject to change without notice.

North American Rayon Corp.

Current Prices

Prices Effective July 25, 1958

First Quality Yarns	Den/Fil	Twist	Knitting* Cones	Cones: No Twist Knitting Cones	Cones: Weaving Cones Beams, Tubes**	Velvet Beams & Cones	Untreated Cakes
	75/30	3.5			1.07	1.07	.95
	75/30	7			1.20	1.20	
	75/30	12			1.28	1.28	
Normal	75/30	15			1.30	1.30	
Strength Yarns	75/30	20			1.33	1.33	
NARCO	100/40/60	3.5			.91	.91	.83
	100/40	12			1.15	1.15	
	125/52/60	3			.89	.89	.80
	150/42	0		.68½			
	150/42/60	3	.74½		.76	.78	.72
	300/75	0		.65			
	300/75	3	.67		.67		.65
	900/46	2.5	.63		.63		
	1800/92	2.5	.63		.63		

* Oiled Cones $.01 Per Pound extra for Graded Yarns only.

** 1 lb. tubes $.02 Per Pound extra for Graded Yarns only.

Terms: Net 30 days, F.O.B. shipping point, minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight to Memphis, Tennessee allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold F.O.B. delivery point.

Prices subject to change without notice.

CELLULOSIC HIGH TENACITY YARN and FABRIC

American Enka Corp.

Effective December 19, 1958

Tempra (High Tenacity)

Denier	Elongation	Beams & Cones
1100/480	Low	.62
1230/480	High	.62
1650/720	Low	.56
1820/720	High	.55
2200/960	High & Low	.55

Enka II

*1100/720	Low	.66
*1650/1100	Low	.60
2200/960	Low & High	.59

Terms: Net 30 days, f.o.b. Enka, North Carolina, or Lowland, Tennessee; minimum freight allowed to first destination east of the Mississippi River.

* Tyrex certified viscose yarn.

American Viscose Corp.

Effective February 2, 1959

Tyrex
Tyrex Certified Viscose Tire Yarn

Denier	Filament	Twist	Beams	Cones
1100	980	0	.66	.66
1100	980	Z	.66	
1650	980	0	.60	.60
1650	980	Z	.60	—

Tire Fabric Made with Tyrex Certified Viscose Tire Yarn and Cord

Denier	Filament	Carcass	Top Ply	Breaker
1100	980/2	.78	.78	.78
	Factor*	Open-525	300-490	115-275
1650	980/2	.685	.695	.72

* Factor determined by dividing total ends by picks.

Tyrex is a certification mark of Tyrex Inc. for Viscose Tire Yarn and Cord.

Rayon Tire Yarn
Yarn

Denier	Filament	Twist	High Strength	Tire Yarn	Super "Rayflex" 110-210-310	Super "Rayflex" 120-220-320
1100	490	Z	—	.62	—	—
1100	980	0-Z	—	—	.65	.66
1150	490	Z	.62	—	—	—
1230	490	Z	.62	—	—	—
1650	980	Z	.56	.56	.59	.60
1650	980	0	—	.56	—	.60
1875	980	Z	.56	—	.59	.60
2200	980	0	—	.55	—	.59
3300	1960	0	—	—	—	.59

High Strength available on cones — tubes — beams.

Tire Yarn and Super "Rayflex"

0 twist — Available on cones, beams or 10# tubes.

Z twist — Available on beams.

Sewing Thread

1100/980 Super "Rayflex"	0-Z	Cones	.63
1780/980 Super "Rayflex"	0-Z	Cones	.58

Also available in colors at .07 premium.

All yarns sold "Not Guaranteed for Dyeing".

Rayon Tire Fabric

1100	490	Tire	.74	.74	.74
1100	980	Super-110-210-310	.77	.77	.77
1100	980	Super-120-220-320	.78	.78	.78
		Factor* Open-525	300-490		115-275
1650	980	Tire	.645	.655	.68
1650	980	Super-110-210-310	.675	.685	.71
1650	980	Super-120-220-320	.685	.695	.72

* Factor determined by dividing total ends by picks.

Cord on cones in regular Tire Yarn twists same as fabric prices.

Other twist combinations — prices quoted on request.

When supplied, yarns and cords in special packages take premiums indicated.

10.5 oz. Wardwell tubes	.05
1.5 lb. Regular Braider tubes	.035
Adhesive Dipped yarn	.05

The following deposit charges are made on invoices.

Beams	$55.00 each
Crates (Metal)	75.00 each
Fabric Shell Rolls	3.50 each

Same to be credited upon return in good condition — freight collect.

Rayon Tire Yarn and Fabric

Terms: Net 30 days. Seller to select and to pay transportation charges of common and contract carrier except when shipment moves West of Mississippi River in which event only the actual cost of transportation to the Mississippi River crossing based on the lowest published freight rate, shall be allowed. Title to pass when merchandise is delivered to consignee. Transportation allowance based on lowest published volume rate shall be granted if merchandise is transported from shipping point in vehicle owned or leased and operated by buyer and title to pass when merchandise is delivered to same.

Prices subject to change without notice.

Celanese Corporation of America

Effective December 27, 1955

Supersedes September 12, 1955

Fortisan Yarn Prices

Denier	Packages	Natural	Black
30/2.5/40	2 lb. Cones	$3.00 lb.	$3.35 lb.
60/2.5/80	4 " "	2.40 "	2.75 "
90/2.5/120	4 " "	2.25 "	2.60 "
120/2.5/160	4 " "	2.05 "	2.40 "
150/2.5/180	4 " "	1.95 "	2.30 "
270/2.5/360	4 " "	1.85 "	2.20 "
300/2.5/360	4 " "	1.85 "	2.20 "

60/2.5/80 Olive Green—Spun Dyed—OG106 4 lb. Cones 3.50 lb.

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A. east of the Mississippi River. Shipments west of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing.

Prices subject to change without notice.

All previous prices withdrawn.

* No transportation allowed (F.O.B. shipping point).

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

Fortisan-36 Rayon Yarn
Bright

Denier and Filament	Twist	4# cones	8# cones	Tubes	Beams
270/280	0.8Z	$2.30			
300/280	0.8Z	$2.05			
300/280	3Z	$2.20			
400/400	0.8Z	$1.75			$1.70
400/400	0			$1.75	
800/800	0.8Z	$1.25	$1.25		$1.20
800/800	3Z	$1.40			
800/800	0			$1.25	
1600/1600	0.8Z	$1.15	$1.15		$1.10
1600/1600	2½Z	$1.30			
1600/1600	0			$1.15	

Terms: Net 30 days. Shipments prepaid to any destination in U.S.A. east of the Mississippi River. Shipments west of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing.

Prices subject to change without notice.

All previous prices withdrawn.

* No transportation allowed (F.O.B. shipping point).

Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept. Current Prices

Effective with orders February 26, 1959

"Super Cordura"*

Den Fil	Turns/in	All Packages
1100-720	2	$.66
1200-720	2	.66
1530-960	2	.63
1600-960	2	.60
1650-1100	2	.60
1800-1100	2	.60
2200-1440	2	.59
2400-1440	2	.59

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

* "CORDURA" and "SUPER CORDURA" are DuPont's registered trade-marks for its high tenacity rayon yarn.

Hagner in Virginia Post

Randall Hagner has been appointed an industrial development agent for the Virginia Department of Conservation and Economic Development. Hagner formerly was associated with Tubize Rayon Co., Owens-Corning Fiberglas Corp., Virginia-Carolina Chemical Corp's Fiber Division, and Metallic Yarns Division of Reynolds Metals Co.

Foster Office Relocates

The southern office of Foster Machine Co. has been relocated at 1205 Johnston Bldg., Charlotte, N. C. Foster builds yarn winding machinery for all fibers and all purposes. The southern office will continue to be staffed by E. P. Dodge, southern manager; George W. Mallory, sales department; Hal E. Hornbuckle, service supervisor, and E. J. Marcotte and C. O. Roberts, service department.

Borg Fabric Expansion

Borg Fabric Division of Amphenol-Borg Electronics Corp. is increasing its productive capacity for deep pile fabrics. Capacity is scheduled to be boosted 20% in 1959. Building contracts for an addition to the division's Jefferson, Wis., plant, for completion and occupancy by April, have been awarded. Purchase of the necessary new equipment is nearly completed. Updating and automation of existing facilities at both the Jefferson and Delavan, Wis., plants is scheduled to be completed by March.

Fashion Movie Available

Alamac Knitting Mills has produced a five-minute 16mm film, "The Inside Story of a Fashion Show," for TV syndication, store education and for showing at women's clubs and home economists' use. The motion picture was taken during a recent large Alamac press showing of women's, men's and children's apparel in Alamac's knitted fabrics. *Copies of the film are available for screening by writing the editors.*

Spindle Upkeep Booklet

Draper Corp., in conjunction with SKF Industries, is seeking to emphasize the importance of proper spindle and bolster maintenance with a new booklet, "Suggestions For Spindle Maintenance." The booklet recommends a planned and complete maintenance program. *For free copies write the editors.*

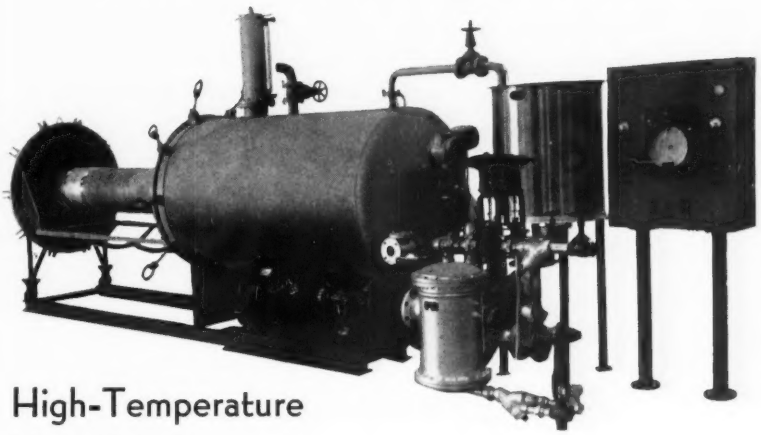
Silk Screen Techniques

"Silk Screen Techniques," written by J. I. Biegeleisen and Max Arthur Cohn is a book written for people with no special equipment or prior knowledge. It describes the process and materials used in the five major stencil techniques: block-out, Tusche, paper, film and photographic stencils. There are also chapters on multi-color silk-screening, illustrated with progressives in four colors. The paperbound book is available from Dover Publications, 920 Broadway, New York City at $1.25.

Antara Chemical Catalog

Antara Chemicals, a sales division of General Aniline & Film Corp., has issued an expanded and completely revised chemicals catalog. The 64-page book is divided into separate sections devoted to surfactants, organic intermediates, acetylene derivatives, carbonyl iron powders, ethylene oxide and glycols and many specialty chemicals. *For free copies write the editors.*

HIGH TEMPERATURE
FABRIC DYEING MACHINE



High-Temperature
High-Pressure

This machine is designed to dye open-width woven fabrics made of synthetic fibers and blends of natural and synthetic fibers that require high temperature-high pressure procedures for good dyeing results. Certain synthetic fabrics are HEAT SET during dyeing thus eliminating an additional process for this purpose.
Machine can be supplied with one-way or two-way flow according to customer specifications. Machine capacity is for cloth up to 120" wide and up to 2,500 yards in length.

OUTSTANDING *NEW* FEATURES

AUTOMATIC HEATING AND COOLING—The exchanger is equipped with automatic steam and water valves so that the temperature controller maintains temperature setting at all times.
STATIC PRESSURE CHAMBER—Compressed air is injected into dyeing vessel to provide a static pressure cushion which allows the dye pump to maintain a constant flow.
RUNNING WASH SYSTEM—Clean water is fed to the dye pump from the expansion tank through large pipe line. The wash water is forced thru the dye pump from the expansion tank through large pipe line. The wash water is forced thru the dye beam and exhausted to drain sewer.
COMPLETELY AUTOMATIC FLOW CONTROL—Desired dyeing pressure is pre-set on control panel, pump is started and pressure is then maintained at set point throughout the entire dyeing cycle. Flow control valve is always closed when dye pump is not running and it is also closed during reversal periods. The valve closes slowly before the flow is reversed from 'outside-in' to 'inside-out' or vice versa, by the 4-way reversing valve. After the flow is reversed the flow control valve opens slowly. This eliminates surges which disturbs the position of the cloth on the dye beam.
AUTOMATIC BEAM REVOLVING DEVICE—The dye beam is revolved by a constant speed driving mechanism and this assures even penetration during the scouring and dyeing cycles. This feature minimizes shading and produces level dyeing from end to end of the dye beam.

GASTON COUNTY DYEING MACHINE CO.
STANLEY NORTH CAROLINA

Gaston County Dyeing Machine Co. Terminal Bldg., 68 Hudson St. Hoboken, N. J., G. Lindner, Mgr.
A. R. Breen 80 E. Jackson Blvd. Chicago, Ill.
Albert P. March Whitemarsh, Pa. Phila. Adams 3-2901
The Rudel Machinery Co., Ltd. 614 St. James St. W., Montreal 260 Fleet St. E., Toronto

Industrial Rayon Corporation

Effective November 1, 1956

Unbleached Bright High Tenacity Yarns

SINGLE END BEAMS AND CONES:

Den.	Fil.	Turns Per In.	4.4 Lb. Cones	Beams	2.2 Lb. Tubes	4.4 Lb. Tubes
1100	480	1.5 "Z"	.59	.59	.59	.59
1650	720	1.5 "Z"	.55		.55	.55
2200	1000	1.5 "Z"	.54	.54	.54	.54
3300	1440	1.5 "Z"	.54	.54	.54	.54
4400	2000	1.5 "Z"	.54	.54	.54	.54

"Above Prices apply to Type 100. Type 200 Tyron Prices are 3¢ more."

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi River.

Prices are subject to change without notice.

Type 400 is only available in 1100/720/1.5 "Z" at a price of 63¢ per pound on beams and cones.

North American Rayon Corporation

		Cones	Beams
Super Super High Strength			
Continuous Yarn Type 630			
1100/720	2.5Z	.66	.66
1650/720	2.0Z	.60	.60
Tire Cord Fabrics			
Super High Strength Type 550			**Rolls**
1650/720			.68½
Super Super High Strength Type 630			
1100/720			.78
1650/720			.68½

* Oiled Cones $.01 per pound extra for Graded Yarns only.

** 1 lb. Tubes $.02 per pound extra for Graded Yarns only.

Terms: Net 30 days, f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station East of the Mississippi River. To points West of the Mississippi River minimum freight to Memphis, Tenn. allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold f.o.b. delivery point.

CELLULOSIC STAPLE & TOW

ACETATE

Celanese Corp. of America

Current Prices

Effective March 17, 1958

(Most Deniers Available in Bright or Dull Luster)

Staple

Celanese Acetate Staple	
2, 3, 5.5, 8, 12 & 17 Denier (Regular Crimp, Type HC, Type D)	$.36
35 Denier	.38
50 Denier	.40
Type F—5.5, 8, 12, 17 Denier	.35
Type K—(Available under Celanese License Agreement)	.39
⅜" to ⅞" length (All Deniers)	.03 (Premium)
35 Denier Flat Filament Acetate	.40
Non-Textile Acetate Fibers	.28*

Tow (Celatow)

2, 3, 5.5, 8, 12 & 17 Denier	$.37
35 Denier	.40
50 Denier	.42

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. east of Mississippi River. Transportation prepaid to any U.S.A. destination west of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

* No transportation allowed (F.O.B. shipping point.)

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

Celanese Corp. of America

Current Prices

Effective March 17, 1958

(Most Deniers Available in Bright or Dull Luster)

Arnel Triacetate Staple and Tow

Arnel Triacetate Staple	**Bright & Dull**
2.5 Individual Denier	$.55
5.0 Individual Denier	.55
Arnel Triacetate Tow	
2.5 Individual Denier 114,000 Total Denier	$.60
5.0 Individual Denier 90,000 Total Denier or 180,000 Total Denier	.60

Packaged on Ball Warps

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. east of Mississippi River. Transportation prepaid to any U.S.A. destination west of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our acknowledgments of orders.

CROSS-LINKED

Courtaulds (Alabama) Inc.

Effective July 25, 1958

Corval

Man-made, cross-linked, cellulosic staple, Bright and Dull, 1½, 3 and 5½ denier ..... $.40 per lb.

Topel

Man-made, cross-linked, cellulosic staple, Bright and Dull, 1½, 3 and 5½ denier ..... $.34 per lb.

Terms: Net 30 days f.o.b. LeMoyne, Alabama; Minimum transportation allowed to points in U.S.A. east of Mississippi River.

RAYON

American Viscose Corp.

Current Prices

Rayon Staple

	Bright and Dull
Regular	$ .31
"Viscose 22"	.31
Extra Strength 1.0 Denier	.34
"Viscose 32A"	.36
"Avisco XL" 1.0 Denier	.40
1.5 & 3.0 Deniers	.37
"Avisco Crimped" 1.25 Denier	.34
3.0 & 5.5 Deniers	.32
8.0 & 15.0 Deniers	.34
"Avisco Super L" 8.0, 15.0 & 22.0 Deniers	.35
Short Staple Blend	.33

Rayon Tow

Grouped Continuous Filaments (200,000 Total Denier) 1.5, 3.0 & 5.5 Denier Per Filament	.33
9.0 Denier Per Filament	.35

Terms: Net 30 days.

American Enka Corp.

Current Prices Effective 1/1/58

Rayon Staple

	Brt.	**Dull**
Regular		
1.5 and 3 denier	$ .31	$ .31
Crimped		
8 denier	.34	...
15 denier	.34	.34

Celanese Corp. of America

Current Prices

Effective Dec. 3, 1957

Rayon Tow

	Bright & Dull
1.5, 3, 5.5 D.P.F. Total denier 200,000	.33
8 D.P.F. Total denier 207,000	.35

Terms: Net 30 days. Transportation prepaid or allowed to any destination in U.S.A. East of Mississippi River. Transportation prepaid to any U.S.A. destination West of Mississippi River, but charge is made for the portion of transportation from river crossing nearest customer's location.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

Orders are subject to conditions of sale appearing on our Acknowledgments of Orders.

Courtaulds (Alabama) Inc.

Effective August 8, 1958

Rayon Staple

	Bright	**Dull**
1½ and 3 denier Available in 1⅛", 1-9/16" and 2".	$.31	$.31

Crimped Rayon Staple

3 and 5½ denier Available in 1-9/16" and 3".	$.32	$.32
3 denier Available in 2".		.32

"Coloray" Spun Dyed Rayon Staple

	1½ Den. 1-9/16"	**3 Den. 2"**	**Price per Lb.**
	(Code numbers for color and denier)		
Black	1404	1419	37¢
Tan	8004	8019	39¢
Medium Brown	8804	8819	39¢
Silver Grey	1004	1019	39¢
Mocha	7704	7719	39¢
Spicenut	7804	7819	39¢
Dark Brown	8604	8619	40¢
Aqua	4704	4719	40¢
Rose	5804	5819	40¢
Dawn Pink	5904	5919	40¢
Ecru	7904	7919	40¢
Slate Grey	0804	0819	43¢
Light Blue	4004	4019	44¢
Sulphur	2004	2019	44¢
Nugget	2304	2319	44¢
Apple Green	5104	5119	45¢
Sage	5304	5319	45¢
Crystal Blue	3904	3919	45¢
Peacock Blue	4604	4619	46¢
Medium Blue	4204	4219	48¢
Dark Blue	4404	4419	49¢
Hunter Green	5404	5419	49¢
Indian Yellow	2504	2519	49¢
Pink	6004	6019	50¢
Turquoise	4804	4819	50¢
Malachite Green	5204	5219	51¢
Red	7004	7019	56¢

(In addition to the above, Black is also available in:
1½ den. 1⅛" (1401) 3 den. 1-9/16" (1416)
3 den. 1⅛" (1413) 5½ den. 3" (1429)

Terms: Net 30 days f.o.b. LeMoyne, Alabama; Minimum transportation allowed to points in U.S.A. east of Mississippi River.

Jamaica Garment Plant

Arrangements for the establishment of a new garment plant in Jamaica, W. I., have been concluded between a group of United States industrialists, headed by Leo Gore of New York, and the Government of Jamaica. The factory will be located close to Kingston, the capital of the island.

New Metro-Atlantic Office

Metro-Atlantic, Inc., has opened a new merchandising and promotional office at 6 East 39th St., New York City. Facilities have been set up to show in detail the advantages of the Ranedare water repellent program. New developments for treating textiles with non-chlorine retentive resins and wash and wear finishes will also be on display at the New York offices.

Personnel Notes

George C. Finn has joined the merchandising department of American Enka Corp.

Thomas S. Waller has been appointed plant manager of the spun yarn plant of Celanese Corp. of America, in Burlington, N. C., succeeding **Frank B. Cameron** who has become production manager of the textile fiber plant in Cumberland, Md. In the company's textile division **Joseph L. Barach** has been appointed sales development manager and **Robert P. Wilson,** assistant general sales manager.

James Barringer has become treasurer of Crompton & Knowles Corp., succeeding **Rufus S. Frost,** retired.

Irvin L. Payne has been named superintendent of the Alabama Division of Dan River Mills, Inc.

Joseph A. Tittl has been promoted to the post of New York sales representative for Wildman Jacquard Co., subsidiary of Draper Corp.

Rol H. Brownlee has been named vice president and general manager for marketing and sales at Cabin Crafts, Inc.

Thomas E. Neal has been appointed general sales representative of Engelhard Industries, Inc. for Florida, Alabama, Georgia and South Carolina.

In the Solvay Process Division **Loy R. Whiteside** has become manager of the Chicago sales branch, succeeding **James M. Murphey,** and **Solon D. Fisher** has become manager of the St. Louis sales branch, succeeding **Elmer J. Seener.**

(Continued on Page 71)

for Unparalleled Beauty of Color ... Globe

package-dyed

SYNTHETIC

yarns ...

Your creations deserve the color brilliance and permanence that Globe package-dyed yarns can provide. Let Globe provide that "seasons ahead" look.

Globe does package dyeing on tubes, skein and warp dyeing and bleaching, warp mercerizing and sizing.

Yarns we process include cotton, worsted, linen, blend and novelty yarns, and all synthetics — including Creslan, Orlon, Arnel and Zefran.

1865 1959

Globe Dye Works Co.

4500 WORTH STREET PHILADELPHIA 24, PA.

JEfferson 5-3301

The Hartford Rayon Co.

Div. Bigelow-Sanford Carpet Co., Inc.

Rayon Staple

Effective November 3, 1958

REGULAR

1.5 denier Bright	
1 9/16", 2"	.31
VISCALON 66 (Crimped)	
8 denier 3" Bright	.34
15 denier 3" Bright	.34
15 denier 3" Dull	.34

"KOLORBON"—Solution Dyed Rayon Staple—3" and 6"

	8 Denier Bright	15 Denier Dull	15 Denier Bright
Cloud Grey	45¢	45¢	
Sandalwood	45¢	45¢	
Nutria	45¢	45¢	
Sea Green	45¢	45¢	
Mint Green	45¢	45¢	
Champagne	45¢	45¢	
Midnight Black	45¢		45¢
Gold	48¢	48¢	
Turquoise	45¢	45¢	
Melon	48¢	48¢	
Capri Blue	45¢	45¢	
Charcoal Grey	45¢	45¢	
Coco	46¢	46¢	
Sable	47¢		47¢
Tangerine	65¢		65¢
Chinese Red	65¢		65¢
Larkspur Blue	45¢	45¢	
Royal Blue	65¢		65¢
Lemon Peel	54¢	54¢	54¢
Kelly Green	54¢	54¢	54¢
Bitter Green	65¢		65¢

Terms: Net 30 days. Prices are quoted f.o.b. shipping point, lowest cost of transportation allowed, or prepaid. To points West of the Mississippi, lowest cost of transportation allowed to the Mississippi River crossing.

North American Rayon Corporation

Current Prices

Rayon Staple

Super High Tenacity	Bright
No. 1 (Unshrunk)	
1, 1.5 & 3 deniers	.40
No. 2 (Preshrunk)	
1, 1.5 & 3 deniers	.40

Rayon Tow

Super High Tenacity	
2200 denier, 1.0 and 1.5 D/F	57.5
4400 denier, 1.0 and 1.5 D/F	47.5

NON CELLULOSIC YARN

NYLON

Allied Chemical Corporation

Caprolan®†

Effective May 20, 1958

Denier	Filament	Turn/In.	Twist	Type**	Package	1st Grade Price/Lb.
200	16	1½	Z	B	Cone	$1.49
560	32	1	Z	HB	Aluminum Tube	1.20
840	136	½	Z	HBT	Aluminum Tube	$1.39
840	136	½	Z	HBT	Beams	1.20
1050	56	½	Z	HB	Aluminum Tube	1.24
2100	112	½	Z	HB	Aluminum Tube	1.20
Heavy Yarn						
2100	408	0	O	HB	Paper Tube*	$1.18
2500	408	0	O	HB	Paper Tube*	1.18
3360	544	0	O	HB	Paper Tube*	1.17
4200	680	0	O	HB	Paper Tube*	1.17
4200	224	0	O	HB	Paper Tube*	1.19
5000	816	0	O	HB	Paper Tube*	1.17
5000	280	0	O	HB	Paper Tube*	1.19
5800	952	0	O	HB	Paper Tube*	1.17
7500	1224	0	O	HB	Paper Tube*	1.16
10000	1632	0	O	HB	Paper Tube*	1.16
15000	2448	0	O	HB	Paper Tube*	1.16

Terms—Net 30 days.
Prices subject to change without notice.
All prices quoted F.O.B. Shipping Point.
Following are invoiced as a separate item.
Bobbins—45 cents each.
Aluminum Tubes—40 cents each.
Beams—$220.00 each.
Cradles for Beams—$53.00.
B—Bright.
H—High Tenacity.
T—Heat Stabilized.
* Paper Tubes non-returnable, no charge.
** Type is used to describe luster and tenacity

Lowest freight cost prepaid or allowed east of Mississippi River, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

† Allied Chemical's polyamide fiber.

American Enka Corporation

Enka Nylon Yarn Prices

Effective August 19, 1958

Den/Fil	Twist	Luster	Type	Tenacity	Pkg.	Net Wt. Pkg.	Price/Pound Std.	Price/Pound Sub.
15 monofil	0.5Z	Semi-dull	9506	Normal	Pirn	1 lb.	$5.25	$5.00
15 monofil	0.5Z	Semi-dull	9506	Normal	Pirn	2 lb.	5.25	5.00
15 monofil	0.5Z	Semi-dull	9506	Normal	Beam	....	5.36	....
15 monofil	0.5Z	Dull	9514	Normal	Pirn	1 lb.	5.30	5.05
15 monofil	0.5Z	Dull	9514	Normal	Pirn	2 lb.	5.30	5.05
15 monofil	0.5Z	Dull	9514	Normal	Beam	....	5.41	....
15/2	0.5Z	Semi-dull	9518	Normal	Pirn	1 lb.	7.37	6.70
18/2	0.5Z	Semi-dull		Normal	Pirn	....	6.65	6.10
20 monofil	0.5Z	Semi-dull	9524	Normal	Pirn	1 lb.	4.95	4.50
20/2	0.5Z	Semi-dull	9478	Normal	Pirn	1 lb.	5.55	5.05
30/4	0.5Z	Semi-dull	....	Normal	Pirn	....	2.62	2.42
30/6	0.5Z	Semi-dull	9466	Normal	Pirn	2 lb.	2.36	2.21
40/8	0.5Z	Semi-dull	9448	Normal	Pirn	2 lb.	2.01	1.91
40/8	0.5Z	Semi-dull	9448	Normal	Beam	....	2.11	....
40/10	0.5Z	Dull	9502	Normal	Pirn	2 lb.	2.06	1.96
40/10	0.5Z	Dull	9502	Normal	Beam	....	2.16	....
50/13	0.5Z	Semi-dull	9528	Normal	Pirn	2 lb.	1.91	1.76
70/32	0.5Z	Semi-dull	9622	Normal	Pirn	2 lb.	1.71	1.66
100/32	0.5Z	Semi-dull	9652	Normal	Pirn	2 lb.	1.65	1.60
200/16	0.6Z	Bright	9826	Normal	Cone	4 lb.	1.49	1.44
200/16	0.5Z	Bright	9826	Normal	Beam	....	1.54	....
200/34	0.6Z	Bright	9832	Normal	Cone	4 lb.	1.49	1.44
200/34	0.5Z	Bright	9832	Normal	Beam	....	1.54	....

Pirns charged at $.25 or $.45 each, depending on type. Deposit refunded upon return of pirn in good condition. Cones are non-returnable. Beams and cradles are deposit carriers and remain property of American Enka Corporation.

Terms: Net 30 days. Minimum common carrier transportation charges will be pre-paid and absorbed to the first destination on or east of the Mississippi River. In pre-paying transportation charges, seller reserves the right to select the carrier used.

The Chemstrand Corp.

Current Prices

Effective June 2, 1958

Denier	Filament	Twist	Type*	Package	Standard Price/Lb.	Second Price/Lb.
10	1	O	SD	Bobbins	$8.42	$7.81
15	1	O	SD	Bobbins	5.25	5.00
15	1	O	SD	Spools	5.36	....
15	1	O	D	Bobbins	5.30	5.00
15	1	O	D	Spools	5.41	....
20	7	Z	D	Bobbins	2.96	2.61
30	10	Z	SD	Bobbins	2.36	2.21
30	10	Z	D	Bobbins	2.41	2.21
30	10	Z	HSD	Bobbins	2.36	2.21
30	26	Z	SD	Bobbins	2.49	2.21
40	7	Z	SD	Bobbins	2.11	1.81
40	10	Z	SD	Bobbins	2.01	1.91
40	13	Z	SD	Bobbins	2.01	1.91
40	13	O	SD	Draw Wind	2.01	1.91
40	13	Z	SD	Spools	2.11	....
40	13	Z	D	Bobbins	2.06	1.96
40	13	Z	D	Spools	2.16	....
50	17	Z	SD	Bobbins	1.91	1.76
50	17	Z	SD	Draw Wind	1.91	1.76
70	34	Z	SD	Bobbins	1.71	1.66
70	34	O	SD	Draw Wind	1.71	1.66
70	34	Z	SD	Spools	1.81	....
70	34	Z	B	Bobbins	1.71	1.66
70	34	O	B	Draw Wind	1.71	1.66
70	34	Z	D	Bobbins	1.76	1.66
70	34	Z	D	Spools	1.86	....
70	34	Z	HB	Bobbins	1.76	1.66
80	26	Z	SD	Bobbins	1.71	1.60
100	34	Z	SD	Bobbins	1.65	1.60
100	34	Z	SD	Spools	1.75	....
100	34	Z	HB	Bobbins	1.70	1.60
140	68	Z	SD	Bobbins	1.60	1.55
140	68	Z	SD	Spools	1.70	....
140	68	Z	B	Bobbins	1.60	1.55
200	34	Z	B	Bobbins	1.49	1.44
200	34	O	B	Draw Wind	1.49	1.44
210	34	Z	HB	Bobbins	1.49	1.44
210	34	O	HB	Draw Wind	1.49	1.44
210	34	Z	HB	Spools	1.54	....
210	34	Z	HB	Beams	1.54	....
210	34	Z	RHB	Bobbins	1.59	1.54
260	17	Z	HB	Bobbins	1.49	1.39
260	17	Z	HB	Spools	1.54	....
420	68	Z	HB	Bobbins	1.39	1.29
520	34	Z	HB	Bobbins	1.39	1.29
630	102	Z	HB	Bobbins	1.39	1.29
780	51	Z	HB	Bobbins	1.39	1.29
840	140	Z	HB	Beams	1.20	1.10
840	140	Z	HB	Tubes	1.20	1.15
840	140	O	HB	Draw Wind	1.20	1.13
840	140	Z	RHB	Beams	1.20	1.13
840	140	Z	RHB	Tubes	1.20	1.13
1040	68	Z	SD	Tubes	1.24	1.14
1040	68	Z	HB	Tubes	1.24	1.14
1680	280	Z	HB	Tubes	1.12	....
2080	136	Z	SD	Tubes	1.20	....
15120	2520	Z	RHB	Tubes	1.16	....

* *Types*: D—Dull; SD—Semi-dull; B—Bright; H—High tenacity.

Bobbins are invoiced at 25¢ or 45¢ each, depending on type; tubes are invoiced at 40¢ each; spools invoiced at $77.00 and $95.00 depending on type; and beams and crates for beams are invoiced at $220 and $25 respectively.

Prices subject to change without notice.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Nylon Yarn

Denier & Filament	Turns/Inch & Twist	Type	Package	1st Grade	2nd Grade
7-1	0	200	Bobbin	$9.47	$8.82
10-1	0	200	Bobbin	8.42	7.82
12-1	0	200	Bobbin	7.35	6.85
15-1	0	200	Beam	5.36	....
15-1	0	200	Bobbin	5.25	5.00
15-1	0	680	Beam	5.41	....
15-1	0	680	Bobbin	5.30	5.00
20-1	0	200	Bobbin	4.95	4.50
14-2	0.2Z	200	Bobbin	7.90	7.30
17-2	0.2Z	200	Bobbin	7.05	6.50
20-2	0.2Z	200	Bobbin	5.55	5.05
15-3	0.2Z	200	Bobbin	6.10	5.60
21-3	0.2Z	200	Bobbin	5.48	5.05
20-7	0.5Z	200	Bobbin	2.91	2.61
20-7	0.5Z	200	Beam	3.02	....
20-7	0.5Z	680	Bobbin	2.96	2.61
20-7	0.5Z	680	Beam	3.07	....
20-20	0.7Z	209	Bobbin	6.00	....
28-4	0.2Z	200	Bobbin	2.81	2.61

Malina acts as your stockroom!
Delivers when wanted... immediately!

RAYON • NYLON • ACETATE YARNS
graded and inferiors—all put ups.

MALORA® METALLIC YARNS
supported and unsupported

THROWN YARNS

HELANCA® STRETCH YARNS
NYLON • DACRON

Malina COMPANY

125 WEST 41st STREET, NEW YORK 36, LOngacre 3-4200

Filling Magazine

(Continued from Page 61)

Another important development in connection with the Draper automatic filling magazine is the experimental work now going on to produce a direct-spun filling bobbin which would be suitable for delivery to the magazine from the spinning frame without rewinding. It is reported that Whitin Machine Works, for one, is well along with the development of a bunch builder which would do the job. It is necessary to use special bobbins with no grooves for about $\frac{3}{4}$" from the top in the vicinity of the tip bunch.

So far, use of direct-spun filling bobbins entails a special machine which picks up the tail and puts the bobbins into the magazine. The doffer puts the full bobbins into a hopper, making sure that the bobbins are oriented in the same direction. The machine can be fed up to 100 bobbins a minute.

Rewound Filling

Another advantage of the Draper filling magazine is the obvious fact that all filling used with the magazine thus far is rewound filling. Many mills feel that there is a distinct advantage in using rewound filling. In most cases net yarn weight on the bobbin is increased and tension is more even. The optimum wind ratio and traverse for clean winding off can be used. Particularly important is the yarn inspection that virtually eliminates slubs and thick and thin places. Improved yarn quality results in higher loom efficiency, reduced weaving, inspection and burling costs, fewer seconds and improved fabric quality. ■

Orlon Filament Again Offered

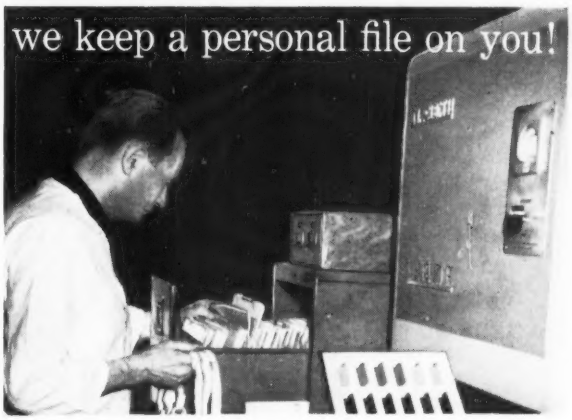
Du Pont has re-introduced its Orlon acrylic fiber in continuous filament form. Said to be in production in limited quantities largely for mill evaluation, the new Orlon filament is reported to be intended as a yarn for texturizing purposes. Du Pont is offering it currently in 200 denier, 80 filament form with a semi dull finish at $2.32 a pound. Production of the earlier Orlon filament yarn was discontinued in 1956.

Sweaters made of the new yarn were shown in Paris last month by the design house of Givenchy. The sweaters were knitted by Talbot Knitting Mills of New York using yarn texturized by Texturized Yarn Co. of Philadelphia. Du Pont has characterized its new Orlon filament as a yarn of improved properties and greater dyeability than the former Orlon filament yarn.

Cupioni Quality Control

With the development of several wash-and-wear finishes for cotton and Cupioni fabric blends, the United States Testing Co., in cooperation with American Bemberg, maker of Cupioni yarn, has announced a program of quality control for the protection of the trade and the consumer. Before any officially identified cotton and Cupioni blend is authorized to display the special wash-and-wear seal, it must be tested under the U.S. Testing Company's new wash-and-wear standards. All manufacturers using approved wash-and-wear Cupioni blends will be entitled to submit their garments for test and approval.

American Bemberg also reported that its new yarn, Parfé, in which color is applied at irregular intervals along the length of the yarn, is being used by converters, in 100% Parfé fabrics and Parfé blend fabrics. Parfé is said to possess the same color characteristics as solution dyed yarns, thus bringing practical serviceability to high-fashion textures.



At ATLANTIC your color is "formularized"
to give you the exact same color anytime!

YARN DYEING

Rayon • Nylon • Acetate • Stretch Yarns
Cakes • Packages • Skeins

Custom-matched colors. Large dye batches.
Any degree of color fastness. Packaged as desired.
PROMPT DELIVERY

Atlantic
Rayon Corporation

125 WEST 41st ST., NEW YORK 36, LONGACRE 3-4200
PLANT: 86 CRARY ST., PROVIDENCE, R. I.

30-10	0.5Z	200	Bobbin	2.36	2.21
30-10	0.5Z	200	Tricot Bms.	2.46	
30-10	0.5Z	300	Bobbin	2.51	2.36
30-10	0.5Z	680	Bobbin	2.41	2.21
30-10	0.5Z	680	Tricot Bms.	2.51	
30-26	0.5Z	200	Bobbin	2.49	2.21
40-1	0	100	Bobbin	4.03	3.75
40-7	0.5Z	200	Bobbin	2.11	1.91
40-10	0.5Z	200	Bobbin	2.01	1.91
40-13	0.5Z	200	Bobbin	2.01	1.91
40-13	0.5Z	200	Tricot Bms.	2.11	
40-13	0.5Z	400	Bobbin	2.13	1.90
40-13	0.5Z	680	Bobbin	2.06	1.96
40-13	0.5Z	680	Tricot Bms.	2.16	
40-34	0.5Z	200	Bobbin	2.21	1.81
50-10	0.5Z	200	Bobbins	2.11	1.76
50-17	0.5Z	100/200	Bobbin	1.91	1.76
50-17	0	200	Tubes	1.91	1.76
50-17	0.5Z	680	Bobbin	2.01	1.76
60-20	0.5Z	200	Bobbin	1.82	1.65
60-34	0.5Z	300	Bobbin	1.86	1.76
70-17	0.5Z	200	Bobbin	1.71	1.66
70-34	0	100	Tubes	1.71	1.66
70-34	0.5Z	100/200	Bobbin	1.71	1.66
70-34	0	105/205	Paper Tube	1.71	1.66
70-34	0	200	Tubes	1.71	1.66
70-34	0.5Z	280	Bobbin	1.71	1.66
70-34	0.5Z	300	Bobbin	1.76	1.66
70-34	0.5Z	680	Bobbin	1.76	1.66
70-34	0	680	Tubes	1.76	1.66
80-26	0.5Z	200	Bobbin	1.71	1.56
90-26	0.5Z	200	Bobbin	1.76	1.66
90-44	0.5Z	200	Bobbin	1.86	1.76
100-34	0.5Z	200	Bobbin	1.65	1.60
100-34	0.5Z	300	Bobbin	1.70	1.60
100-34	0	300	Tubes	1.70	1.60
100-34	0.5Z	680	Bobbin	1.70	1.60
100-50	0.5Z	200	Bobbin	1.71	1.60
110-50	0.5Z	200	Bobbin	1.71	1.60
140-68	0.5Z	100	Bobbins	1.60	1.55
140-68	0	200	Tubes	1.60	1.55
140-68	0.5Z	200	Bobbin	1.60	1.55
140-68	0	205	Tube	1.60	1.55
140-68	0.5Z	300	Bobbin	1.65	1.55
200-20	1Z	100	Bobbin	1.49	1.44
200-34	0	100	Tubes	1.49	1.44
200-34	0.7Z	100	Bobbin	1.49	1.44
200-34	0	105	Tube	1.49	1.44
200-34	0.7Z	680	Bobbin	1.54	1.44
200-68	0.7Z	100/200	Bobbin	1.56	1.44
210-34	0	300	Tubes	1.49	1.44
210-34	0.7Z	300	Bobbin	1.49	1.44
210-34	0.7Z	300	Beam	1.54	...
210-34	0	305	Tube	1.49	1.44
210-34	0.7Z	330	Bobbin	1.59	1.44
260-17	1Z	300	Bobbin	1.49	1.39
400-68	0.7Z	100	Bobbin	1.39	1.29
420-68	1Z	300	Bobbin	1.39	1.29
520-34	1Z	300	Bobbin	1.39	1.29
630-102	0.7Z	300	Bobbin	1.39	1.29
780-51	1Z	300	Bobbin	1.39	1.29
800-140	0.5Z	100	Bobbin	1.39	1.29
840-140	0.5Z	300/700	Al. Tbs	1.20	1.13
840-140	0.5Z	300/700	Beam	1.20	...
1680-280	0.5Z	300/700	Al. Tbs. & Beams	1.12	...

Color-Sealed Yarn

Denier & Filament	Turns/Inch & Twist	Type	Package	1st Grade	2nd Grade
30-10	0.5Z	140	Bobbin	$2.71	$2.56
40-13	0.5Z	140	Bobbin	2.36	2.16
70-34	0.5Z	140	Bobbin	2.06	2.01
100-34	0.5Z	140	Bobbin	2.00	1.95
100-34	0	140	Tubes	2.00	1.95
200-34	0.7Z	140	Bobbin	1.84	1.79
260-17	1Z	140	Bobbin	1.84	1.79

Industrial Yarn				Price/Lb.
840-140	0.5Z	707	Cone	$1.13
2520-420	0	300/700	Paper Tube	1.18
4200-700	0	300/700	Paper Tube	1.17
5040-840	0	300/700/707	Paper Tube	1.17
7560-1260	0	300/700/707	Paper Tube	1.16
10080-1680	0	300/700/707	Pauer Tube	1.16
15120-2520	0	300/700/707	Paper Tube	1.16

These prices are subject to change without notice. Terms: Net 30 Days.

Types

Type 100—Bright, normal tenacity.
Type 105—Bright, normal tenacity, low shrinkage (5-7%)
Type 140—Bright, color-sealed, black, normal tenacity.
Type 200—Semidull, normal tenacity.
Type 205—Semidull, normal tenacity, low shrinkage (5-7%)
Type 209—Semidull, normal tenacity, improved light durability and dye light fastness.
Type 300—Bright, high tenacity.
Type 305—Bright, high tenacity, low shrinkage (5-7%)
Type 330—Bright, high tenacity, more heat & light resistant.
Type 400—Semidull, high tenacity.
Type 420—Semidull, high tenacity, high modulus, no crimp
Type 680—Dull, normal tenacity.
Type 700—Bright, high tenacity.
Type 707—Bright, high tenacity (over 8.5 gpd) cordage yarn.

Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Following are invoiced as a separate item.
Bobbins—25 cents or 45 cents depending on type
Aluminum Tube—40¢ each
Draw Winder Tubes—$.70 or $1.00 depending on type
Tire Cord Beams—$220.00 each
Cradles for Tire Cord Beams—$115.00 each
Tricot Beams—$95.00 each
Cradles for Tricot Beams—$130.00 each
(Beams and Cradles are deposit carriers and remain the property of E. I. du Pont de Nemours & Co., Inc.)

POLYESTER

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices

"Dacron"*

Denier & Filament	Turns/Inch	Luster	Type*	Tubes 1st Gr.
30-14	0	Bright	55	$2.71
30-20	0	Semidull	56	2.71
40-27	0	Semidull	56	2.31
40-27	0	Bright	55	2.31
40-27	0	Dull	57	2.36
70-34	0	Semidull	56	1.91
70-14	0	Bright	55	1.91
70-34	0	Bright	55	1.91
70-34	0	Dull	57	1.96
100-34	0	Semidull	56	1.84
140-28	0	Bright	55	1.79
150-34	0	Semidull	56	1.79
220-50	0	Bright	51	1.76
250-50	0	Bright	55	1.76
1100-250	0	Semidull	59	1.50
1100-250	0	Bright	51	1.50
1100-250	0	Bright	52	1.50

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Yarn Types

* Type:
Type 51—Bright, high tenacity.
Type 52—Bright, high tenacity.
Type 55—Bright, normal tenacity.
Type 56—Semidull, normal tenacity.
Type 57—Dull, normal tenacity.
Type 59—Semidull, high tenacity.

Tubes are invoiced as a separate item at $.70 each.

* "DACRON" is DuPont's registered trade-mark for its polyester fiber.

Eastman Chemical Products, Inc.

Tennessee Eastman Co.
Effective September 15, 1958

"Kodel"*

1½ denier	$1.60
3 and 4½ denier	1.50

Terms: Net 30 days.

SARAN FIBERS

The Saran Yarns Company — Odenton, Maryland

The Hall Company (Selling Agent)
41 East 42 Street, New York 17, N. Y. (Oxford 7-8996)
Current Prices:
CONTINUOUS FILAMENT

Type	Twist p. i.	Natural	Colors
1240/10	3	$1.32	$1.37
750/20*	3	1.75	1.80

* For filter fabrics and other industrial purposes only.
F.O.B. Odenton, Maryland.
Terms: Net 30 days.

NON CELLULOSIC STAPLE & TOW ACRYLIC

The Chemstrand Corp.

Current Prices

"Acrilan"*

Effective January 1, 1959

	Regular Acrilan	Acrilan 16
2.0 denier Semi-Dull and Bright staple & tow	$1.24	$1.24
2.5 denier Hi-Bulk Bright and Semi-dull staple and tow	1.18	1.18
3.0 denier Bright & Semi-dull staple & tow	1.18	1.18
5.0 denier Bright & Semi-dull staple & tow	1.18	1.18
8.0 denier Bright & Semi-dull staple	1.18	1.18
15.0 denier Bright & Semi-dull staple	1.01	1.05

Terms: Net 30 days. Freight prepaid to points east of the Mississippi River.

* "Acrilan" is Chemstrand's registered trademark for its acrylic fiber.

The Dow Chemical Company

Textile Fibers Department
Current Prices

"Zefran"*

2.0 denier Semidull & Bright—Staple only	$1.33
3.0 denier Semidull & Bright—Staple only	1.28
6.0 denier Semidull & Bright—Staple only	1.20

Terms: Net 30 days.

Transportation Terms: F.O.B. shipping point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the U. S., for points west of the Mississippi River crossing nearest purchaser's mill if shipped overland or port of exit of purchaser's choice east of the Mississippi River.

* "Zefran" is Dow's registered trademark for its acrylic alloy fiber.

Robert K. White has been named assistant director of advertising at Allied Chemical Corp. In the company's research laboratory in Morristown, N. J. **Dr. George Joris** has become manager of research, **Donald A. Rogers**, manager of project analysis and **Dr. Frank Porter**, assistant to Mr. Hackett.

Frank F. Myers has been appointed manager of the Charlotte office of Geigy Dyestuffs, division of Geigy Chemical Corp., succeeding **Howard M. Sprock.**

H. G. Shelton

Harold G. Shelton has been named general manager of the Dyestuff & Chemical Division of General Aniline & Film Corp., succeeding **Philip M. Dinkins**, recently elected president of the company.

Dr. Frank J. Soday has joined the Liquid Carbonic Division of General Dynamics Corp. as director of research and development.

J. L. Cherry

Jay L. Cherry has been appointed advertising manager for Saco-Lowell Shops. **Arthur Howard** has been transferred from the Victor Traveler Co. in Providence to Saco-Lowell's replacement Parts Div. in Greenville and has assumed the title of Victor sales coordinator.

R. L. Carroll has become representative for Heany Industrial Ceramic Corp. serving the southern states.

Charles W. Bellows has been appointed sales manager of the industrial fabrics division of Indian Head Mills, Inc., replacing **Elmer Van Zandt. Harry Gardner** has been assigned to assist him.

Francis A. E. Spitzer has been appointed president of the International Division of Interchemical Corp., succeeding **Joseph G. Morris**, who is retiring.

Arthur T. Hatton & Co. have been appointed sales representatives for Lindly & Co. to handle the Lindly equipment in the New England states.

Hayden C. Cobb, Jr. has been appointed sales manager for Metlon Corp., covering North and South Carolina, and Virginia.

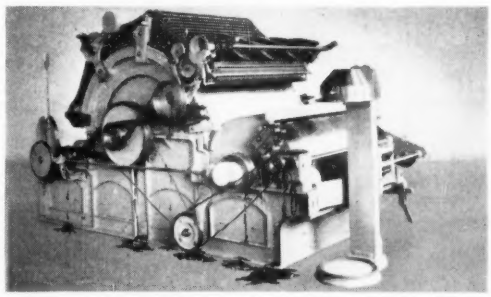
Norman A. Jerome has been appointed superintendent of the Pawtucket plant of National Ring Traveler Co.

Smith, Crawford and Teat has been appointed sales representatives in the Ga. and Ala. territory for Stedco-Southern, Inc.

Paul Jambor has been appointed chief designer in women's wear for the Forstmann Division of J. P. Stevens & Co., Inc.

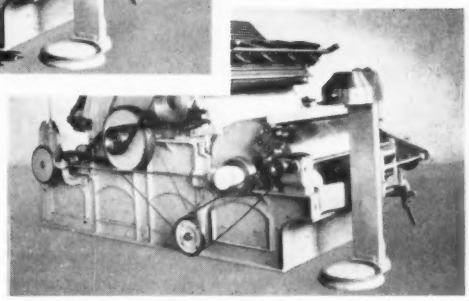
(Continued on Page 73)

NON-FLUID OIL
TRADE MARK REGISTERED



Ordinary Oil throws and spatters

NON-FLUID OIL stays where applied



When bearing wear throws Doffer and Top Flats out of alignment, uneven sliver results. Ordinary oil and thin grease cannot prevent bearing wear because they do not stay in bearings, but drip and spatter out.

NON-FLUID OIL adheres to bearing surfaces—lubricates and protects them *until it is completely consumed.*

In comb boxes, NON-FLUID OIL prevents heating and minimizes wear. It outlasts even the best grade of ordinary oil 4 to 6 times. In addition, NON-FLUID OIL is dripless; it will not throw or spatter on card clothing and cotton—which means less waste, as well as savings in application time and lubricant.

Seven out of ten mills now use NON-FLUID OIL in their card rooms. Write for Bulletin T-5 and free testing sample.

NEW YORK & NEW JERSEY LUBRICANT COMPANY

292 Madison Ave., New York 17, N. Y.

WORKS: Newark, N. J.

So. Dist. Mgr.; Fred W. Phillips, Greenville, S. C.

WAREHOUSES:

Birmingham, Ala. Atlanta, Ga. Columbus, Ga. Charlotte, N. C. Greenville, S. C. Chicago, Ill. Springfield, Mass. Greensboro, N. C. Detroit, Mich. Providence, R. I. St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Orlon"** Acrylic Staple & Tow

Type 42	1st Grade
1.0 Denier Semidull	$1.28
2.0 Denier Semidull & Bright	1.28
3.0 Denier Semidull & Bright	1.28
3.0 Denier Semidull Color-sealed Black	1.63
6.0 Denier Semidull & Bright	1.18
6.0 Denier Color-sealed Black	1.55
4.5 Denier Semidull	1.18
10.0 Denier Semidull & Bright	1.18

Tow—Total Denier 470,000

Staple Lengths—1½", 2", 2½", 3", 4½"

High Shrinkage Staple price as Regular Staple

Type 25 $1.18

This product is designed for *Cotton/Rayon System* Spinning and is 2.5 denier, 1½" semidull regular shrinkage staple.

Type 39 $.94

This product is designed for *woolen system spinning* and is a blend of deniers (average 4.2) with a variable cut length.

Type 39A $.99

This product is designed for *woolen system spinning* and is a blend of predominately fine deniers (average 2.4) with a variable cut length.

Type 39B $.94

This product is designed for *woolen system spinning* and is a blend of predominately heavy deniers (average 6.5) with a variable cut length.

F.O.B. Shipping Point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Terms: Net 30 Days.

** "ORLON" is DuPont's registered trade-mark for its acrylic fiber.

Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective November 3, 1958

"Verel"* Staple and Tow

Deniers	Dull and Bright
2 and 3	$1.02 per pound
5, 8, 12, 16, and 20	.92
24 denier	.97

Prices are subject to change without notice.

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in the United States east of the Mississippi River. Seller reserves the right to select route and method of shipment. If buyer requests and seller agrees to a route or method involving higher than lowest rate buyer shall pay the excess of transportation cost and tax.

* "Verel" is a trade-mark of the Eastman Kodak Co.

The B. F. Goodrich Company

B. F. Goodrich Chemical Co.

DARVAN

Effective Nov. 21, 1958

Type	Price Per Pound Not Crimp Set	Crimp Set
3, 4½ and 6 Denier	$1.45	$1.50
1½, 2 Denier	$1.50	$1.55

Pack in 100 Lb. Bales, Net

Staple lengths 1½, 2, 3, 4½

Tow—90,000 Total Denier

Bright, Semi-dull, Dull

(Deniers and lengths of staple not listed above are available upon special request.)

Terms: Net 30 Days.

F.O.B. Shipping Point—Minimum freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if overland, or port of exit of purchaser's choice east of the Mississippi River.

Union Carbide Chemicals Co.

Div. Union Carbide Corp.

Textile Fibers Dept.

Effective October 1, 1957

Dynel Staple & Tow

Natural Dynel	
3, 6, and 12 Denier, Staple and Tow	1.10 per lb.
24 Denier, Staple and Tow	1.05 per lb.
Dynel Spun with Light Colors: Whitened, Blond, or Gray	
3 and 6 Denier, Staple and Tow	1.30 per lb.
Dynel Spun with Dark Colors: Black, Charcoal, and Brown	
3 and 6 Denier, Staple and Tow	1.40 per lb.
Dynel Type 63 Bulking Fiber (3 Denier only)	Add $.05 per lb. to above prices

Prices are quoted f.o.b. South Charleston, W. Va.

NYLON

American Enka Corp.

Effective August 19, 1958

Enka Nylon (Nylon Six Staple)

Denier	Luster	Length (Inches)	Price per pound
3	semi-dull	1⅛, 1½, 2, 2⅝, 3, 4½	$1.28
6	bright	3, 4½	1.28
8	bright	2⅝	1.15
10	bright	3	1.08
15	bright	3	1.08
15	semi-dull	3	1.08

Deniers and lengths of staple not listed above are available upon special request.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Nylon Staple and Tow

Denier	Type	Staple Lengths	Tow Bundle	1st. Grade Price/Lb.	2nd Grade Staple Only
1.5	200	1⅛"—4½"	None made	$1.33	$1.18
1.5	201	1⅛"—4½"	None made	1.35	1.20
2.2	420	1½" only	None made	1.28	1.13
3.0	100/200	1⅛"—4½"	430M	1.28	1.13
3.0	101/201	1⅛"—4½"	455M	1.30	1.15
6.0	100	1⅛"—4½"	330M	1.28	1.13
6.0	101	1⅛"—4½"	345M	1.30	1.15
15.0	100	1½"—6½"	425M	1.08	....
15.0	101	1½"—6½"	None made	1.10	....
15.0	600	1½"—6½"	425M	1.10	....
15.0	601	1½"—6½"	None made	1.12	....

Staple lengths are restricted to the range shown opposite each denier above. The actual cut lengths within these ranges are as follows:

1⅛, 1½, 2, 2½, 3, 4½ and 6½

Types

Type 100 Bright, normal tenacity, not heatset.
Type 101 Bright, normal tenacity, heatset.
Type 200 Semidull, normal tenacity, not heatset.
Type 201 Semidull, normal tenacity, heatset
Type 600 Dull normal tenacity, not heatset.
Type 601 Dull normal tenacity, heatset.

These prices are subject to changes without notice.

Terms—Net 30 Days.

Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Industrial Rayon Corp.

Effective August 18, 1958

Nylon Staple

1.5 denier	$1.33 per lb.
2, 3 and 6 denier	1.28 per lb.
8 denier	1.15 per lb.
15 and 22 denier	1.08 per lb.

Bright, semi-dull, and full-dull. Required lengths.

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges prepaid with transportation allowed at lowest published rate to all points east of the Mississippi River.

POLYESTER

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Dacron"* Staple and Tow

Denier	Luster	Type	Length	Tow Bundle	1st Gr.
1.25	Semidull	54	1¼"-3"		$1.36
1.5	Semidull	64	Tow only	375M-600M	1.41
1.5	Semidull	54	1¼"-3" & Tow	375M-600M	1.36
3.0	Semidull	64	1¼"-4½" & Tow	375M-500M	1.41
3.0	Semidull	54	1¼"-4½" & Tow	375M-500M	1.36
4.5	Semidull	64	1¼"-4½" & Tow	375M-500M	1.36
4.5	Semidull	54	1¼"-4½" & Tow	375M-500M	1.31
6.0	Semidull	64	1¼"-4½" & Tow	375M-500M	1.36
6.0	Semidull	54	1¼"-4½" & Tow	375M-500M	1.31

* Type:

Type 54—SemiDull, Normal Tenacity.

Type 64—Pill Resistant more Dyeable Staple for Worsted & Rayon Blends.

F. O. B. Shipping Point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

POLYVINYL ACETATE

American Viscose Corp. Effective October 1, 1956

"Vinyon"® Staple

3.0 denier	½" unopened	$.80 per lb.
3.0 "	1¼" unopened	.80 per lb.
3.0 "	1¼" opened	.90 per lb.
3.0 "	2" opened	.90 per lb.
3.0 "	2" unopened	.80 per lb.
5.5 "	1" opened	.90 per lb.
5.5 "	3½" opened	.90 per lb.
5.5 "	3½" unopened	.80 per lb.

Terms: Net 30 days.

SARAN FIBERS

The Saran Yarns Company — Odenton, Maryland

The Hall Company (Selling Agent)

41 East 42 Street, New York 17, N. Y. (Oxford 7-8996)

Current Prices:

Accurate
Yarn is under perfect tension from a central location. One dial adjustment changes tension uniformly at all tension stations.
The Lindly Electrotense: Simple, compact, inexpensive. Accurately controls yarn tension from zero to about 20 grams.

DIAL CONTROL of YARN TENSION

at Any Number of Stations!

The Lindly ELECTROTENSE is the new, inexpensive, electro-mechanical way to control yarn tension from almost zero to about 20 grams. A turn of a single, centrally located dial applies desired tension evenly and simultaneously at all tension stations.

What are the advantages?

The Lindly ELECTROTENSE permits easy, instant change of yarn tension. It results in more uniform beams, more yarn per warp beam, less maintenance and machine down-time, fewer broken ends and better cloth.

GET THE FULL FACTS ON THIS NEW TIME-SAVING, QUALITY-IMPROVING, COST-CUTTING LINDLY SYSTEM. WRITE, WIRE OR PHONE TODAY!

It Pays to Know LINDLY the Lindly Count

LINDLY & COMPANY, INC.
248 HERRICKS ROAD
MINEOLA, NEW YORK

Herman Langbehn has been named sales representative for Stanley Steel Strapping, division of The Stanley Works, covering central California.

Paul Kaplan has been promoted to the position of technical director of Stein, Hall & Co., Inc. Further appointments in the company include **Albert R. Robbins,** manager of the development department and **Arthur M. Goldstein,** director of the company's New York laboratories.

T. B. Baldridge, Jr.

T. Bayard Baldridge, Jr. has joined U. S. Textile Machine Co. as a sales engineer for the northeastern states, and **William P. Russell** will cover Fla., Miss., Ga., Ala., and Tenn.

R. I. Dalton, Jr. has been promoted to the post of manager of the Whitin Cotton System Machinery Sales Div., of Whitin Machine Works. **Mason P. Thomas** has been assigned to the new machinery sales division and **Jesse A. McCall** has joined the Whitin sales office in Atlanta, replacing **W. G. Stainton.**

Ch. G. Landes

Chester G. Landes has been appointed technical director of Wica Chemicals, Inc.

Arthur M. Spiro has resigned from the marketing division of Industrial Rayon Corp.

Deaths

Max Einstein, 64, vice president of Standard Chemical Products, Inc.

Ubald E. Dubois, retired sales engineer of Saco-Lowell Shops.

Henry A. Birnbaum, in charge of the purchase of yarn and fiber for United Merchants & Manufacturers.

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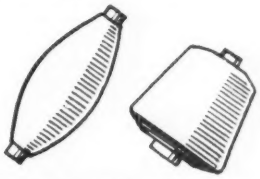
OVER 35 YEARS EXPERIENCE

HOFFNER RAYON CO.

THE COMPLETE PACKAGE



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General Offices at Belgrade and Ontario Streets, Philadelphia 34, Pennsylvania. Plants at Philadelphia and Quakertown, Pennsylvania.

SALES REPRESENTATIVES

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Johnston Bldg. Charlotte, N. C.
The Tillinghast-Stiles Co.
Providence, R. I. Chicago, Ill.
R. C. Osborne & Co.
Broad St. & Allegheny Ave.
Phila. 32, Pa.
Carl L. Miller
808 First Nat'l Bank Bldg., Utica, N. Y.

Saran Staple

Type	Denier	Natural	Colors
2N	22	$0.70	$0.75
2N	16	.74	.79
3Q*	22	.63	.67

In any staple length 1½ to 6". Also 45 denier, 7" cut.
* For carpets and industrial fabrics.
F.O.B. Odenton, Maryland.
Terms: net 30 days.

METALLICS

Textile Fibers Dep't

The Dow Chemical Co., James River Div.
Williamsburg, Va.

Lurex Yarn Division Current Prices

#150 LUREX-MM* (Made with Metalized Mylar)

Width	1/128"	1/100"	1/64"	1/50"	1/32"
Silver					
Yield in Yds/Lb	42,400	35,300	23,200	16,600	10,500
1 Case to 1,999#	$10.65	$10.25	$7.80	$7.60	$7.35
2,000# to 4,999#	10.10	9.75	7.40	7.20	7.00
5,000# and over	9.90	9.55	7.25	7.05	6.85
Gold & White Gold					
Yield in Yds/Lb	37,900	30,000	19,200	15,000	9,400
1 Case to 1,999#	$10.90	$10.50	$8.00	$7.75	$7.60
2,000# to 4,999#	10.35	10.00	7.60	7.35	7.20
5,000# and over	10.15	9.75	7.45	7.20	7.05
Standard Colors					
Yield in Yds/Lb	37,500	29,500	19,100	15,400	9,300
1 Case to 1,999#	on	on	$9.00	on	$8.70
2,000# to 4,999#	Re-	Re-	8.55	Re-	8.25
5,000# and over	quest	quest	8.35	quest	8.10

#150 LUREX MF* (Mylar—Foil—Mylar)

Width	1/100"	1/64"	1/50"	1/32"
Silver				
Yield in Yds/Lb	26,000	18,700	13,900	9,300
1 Case to 1,999#	$7.80	$5.45	$5.25	$5.15
2,000# to 4,999#	7.40	5.15	5.00	4.90
5,000# and over	7.25	5.05	4.90	4.80
Gold, White Gold & Copper				
Yield in Yds/Lb	24,000	17,250	12,700	8,400
1 Case to 1,999#	$8.00	$5.60	$5.40	$5.30
2,000# to 4,999#	7.60	5.30	5.15	5.05
5,000# and over	7.45	5.20	5.00	4.90
Standard Colors				
Yield in Yds/Lb	25,000	17,500	13,000	8,700
1 Case to 1,999#	$8.75	$6.30	$6.15	$6.00
2,000# to 4,999#	8.30	6.00	5.85	5.70
5,000# and over	8.10	5.85	5.70	5.60

#260 LUREX* (Regular Butyrate)

Width	1/100"	1/80"	1/64"	1/50"	1/32"	1/16"
Gold, Silver & Copper						
Yield in Yds/Lb	16,400	13,000	10,500	8,200	5,200	2,600
1 Case to 1,999#	$4.50	$4.00	$3.35	$3.25	$3.00	$2.85
2,000# to 4,999#	4.30	3.80	3.20	3.10	2.85	2.70
5,000# and over	4.20	3.70	3.10	3.00	2.80	2.65
Standard Colors						
Yield in Yds/Lb	—	—	10,500	8,200	5,200	—
1 Case to 1,999#	—	—	$3.45	$3.35	$3.10	—
2,000# to 4,999#	—	—	3.30	3.20	3.00	—
5,000# and over	—	—	3.20	3.10	2.90	—
Multicolors						
Yield in Yds/Lb	—	13,000	10,500	—	5,200	—
1 Case to 1,999#	—	$4.30	$3.65	—	$3.30	—
2,000# to 4,999#	—	4.10	3.45	—	3.15	—
5,000# and over	—	4.00	3.40	—	3.10	—

A. LUREX*, LUREX-MM*, and LUREX MF* are the registered trademarks of The Dobeckmum Company, A Division of The Dow Chemical Company. Mylar is DuPont's polyester film.

B. Standard Colors:

L-941	Scarlet	L-981	Pink Opal
L-984	Turquoise	L-942	Peacock Blue
L-940	Emerald Green	L-983	Violet
L-861	Bronze	L-978	Gunmetal
2A-1	Multicolor	3A-2	Multicolor
4A-5	Multicolor	4A-7	Multicolor
6A-1	Multicolor	6A-2	Multicolor
L-869	Fuchsia	L-982	Blueflower
L-935	Royal Blue	L-980	Apple Green
L-1008	Purple	L-933	Copper
L-850	Jet	L-1007	Green Gold
3A-3	Multicolor	1A-3	Multicolor
4A-14	Multicolor	4A-4	Multicolor
6A-3	Multicolor	3A-4	Multicolor

C. Other colors available on a custom basis only for which a minimum firm order of 150 lbs. is required. Regular color prices will apply. After approval of color swatch, one sample run of 10 lbs. or over can be ordered with an up-charge of $2.00 per lb. over regular color prices.

D. LUREX-MM, LUREX-MF and regular LUREX is supplied on disposable spools having plastic end plugs with 3/8" I.D. holes. Spools contain approx. 1 lb. of yarn.

E. Cases contain 6 LUR-PAKS. Each LUR-PAK contains 6 one pound spools.

F. Yields are subject to variation of plus or minus 5%.

G. TERMS: 1% 10 days from date of invoice, Net 30 days, FOB Cleveland, Ohio. Minimum freight allowed on shipments of 100 pounds and over.

H. Items may be combined for quantity prices.

Metlon Corp.

Effective December 1, 1958
Replaces September 2, 1958

METLON*—MYLAR**
Price List

METLON* V—MYLAR** (Vacuum deposited, 2 ply)

Width	Yards Per Lb. (Plus or minus 5%)	Silver Only Price Per Lb.
1/64"	31,000	$8.50
1/50"	24,000	8.35
1/32"	15,500	8.20

METLON* V—MYLAR** (Vacuum deposited, 3 ply)

Width	Yards Per Lb. (Plus or minus 5%)	Price Per Lb. Gold	Silver
1/64"	21,000	$7.35	$7.25
1/50"	16,400	7.10	7.05
1/32"	10,500	6.95	6.85

Colors available in 3 ply only at 65¢ per pound over price for Gold.
No Quantity Discounts On Either Quality.
Terms: 1% 10 days, net 30. F.O.B. Providence, Rhode Island. Minimum freight allowed on shipments of 100 lbs. or over.
Put Up: Plastic Disposable Spools.
Minimum Order: One case (approximately 35 lbs. net). Smaller quantities subject to surcharge.
Palletizing: On request, shipments of 4 cases or more will be palletized without additional charge.
* Metlon's registered trademark for non-tarnishing metallic yarn.
** DuPont's registered trademark for polyester film.

METLON*—MYLAR** (Foil Laminated)

	1/120"	1/80"	1/64"	1/50"	1/32"
Metlon-F Mylar					
Yards Per Lb. (±5%)	32,200	21,500	17,200	13,500	8,600
Gold	$9.35	$6.75	$5.20	$5.00	$4.90
Silver	9.35	6.75	5.05	4.90	4.80
Standard Colors	10.00	7.40	5.85	5.65	5.55
Metlon-F Mylar Ultravat					
Yards Per Lb. (±5%)	32,200	21,500	17,200	13,500	8,600
Gold	$9.60	$7.00	$5.65	$5.45	$5.35
Silver	9.60	7.00	5.55	5.40	5.30
Metlon-F Mylar Superfine					
Yards Per Lb. (±5%)	35,100	23,450	18,750	14,700	9,400
Gold	$10.00	$7.25	$5.60	$5.40	$5.30
Silver	10.00	7.25	5.50	5.30	5.20
Standard Colors	10.65	7.90	6.25	6.05	5.95
Metlon-F Mylar Superfine Ultravat					
Yards Per Lb. (±5%)	35,100	23,450	18,750	14,700	9,400
Gold	$10.25	$7.50	$6.00	$5.85	$5.75
Silver	10.25	7.50	6.00	5.85	5.75

Prices for 1/16" and 1/8" same as for 1/32". Yields are proportionate.
* Metlon's registered trademark for non-tarnishing metallic yarn.
** DuPont's registered trademark for polyester film.

Make Your Reservations Now!

The April Issue of MTM will preview the Knitting Arts Exhibition in Atlantic City, May 4 to May 8, 1959.

Closing date for Advertising Forms—March 5.

For advertising space in this important issue write

MODERN TEXTILES MAGAZINE

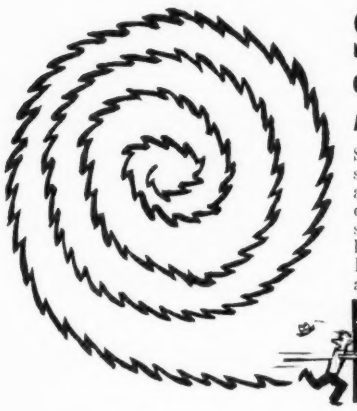
303 Fifth Ave., N. Y. 16, N.Y.

Riggs & Lombard Office

Riggs & Lombard, Inc., has opened its new southern office at 227 West Third St., Charlotte, N. C. L. T. Parkman heads the new office.

Changes Division Name

Celanese Corp. of America has changed the name of its Textile Division, which henceforth will be known as the Fibers Division. Celanese said the new designation describes more accurately operations of the division which, during recent years, has been diversifying actively into industrial and other new market areas beyond traditional textile end uses.



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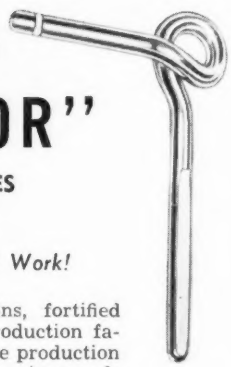

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the finest in Hard Chromium Plated Work!

For over 35 years—Collins, fortified with the technique and production facilities, has pioneered in the production of wire work to suit the growing needs of the textile industry.

And today, Collins "Irridior" Thread Guides are "tops" in the processing of Nylon and Rayon threads—because "Irridior" means harder, denser chrome-plating designed to last longer.

"For those who prefer Matte or Sandblast finish, try our Irridior Matte Finish F75."

COLLINS SUPPLY & EQUIPMENT CO.
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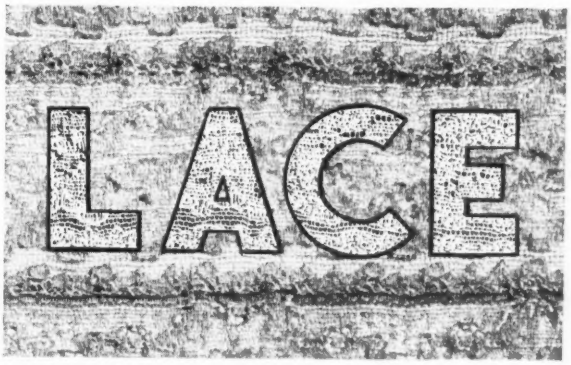
"Graphtex" FOR



"Graphtex" is THE Scour for Removing Graphite from Nylon Lace!

LeaTex

LEATEX CHEMICAL COMPANY
2727 N. HANCOCK ST., PHILADELPHIA, PA.

Verel Carpets

(Continued from Page 47)

with Verel. The ability of Verel to be readily twist set adds to its style versatility.

SUMMARY AND CONCLUSIONS

In summary, carpets of Verel have good crush resistance, outstanding texture retention, excellent soil resistance and cleanability, excellent stain resistance and spot removal, and good wearing qualities. In addition, they are mothproof, nonallergenic, and will not propagate a flame.

As a result of the test results discussed in this article and observations of Verel carpet installations, it has been concluded that Verel is unusually well qualified to give outstanding service and value in floor coverings.

BIBLIOGRAPHY

1. H. W. Coover, Jr., "Verel Acrylic Fiber—Physical and Chemical Aspects," MODERN TEXTILES, Dec. 1956, pp. 68-71.
2. W. R. Ivey, Jr., "Verel Acrylic Fiber—Its Dyeing and Finishing Properties," MODERN TEXTILES, Dec. 1956, pp. 71-72.
3. Coover, Crawford, Ivey, Langstaff and Wooten, "Verel, Eastman's Modified Acrylic Fiber," talk presented at the meeting of The Canadian Association of Textile Colourists and Chemists, Montreal, Canada on Nov. 16, 1957.
4. A. S. Weatherburn, C. H. Bagley, "Soil Retention by Textile Fibers," *Research*, April 1958, pp. 141-146.
5. J. W. Shappel, "Performance Characteristics of Synthetic Fibers, Wool, Viscose and Blended Fibers in Axminster Carpets," *Journal of Textile Research*, Vol. XXVI, March 1956, pp. 211-226.
6. W. I. Langstaff, E. J. Nickerson, and L. P. Hoskins, "Lofted Acetate in Carpets," MODERN TEXTILES, Nov. 1957.

To Weave Bondyne Fabrics

Reeves Brothers, Inc., expects shortly to begin production of a new line of Bondyne apparel fabrics. Reeves is the first firm in the U. S. to make these fabrics under special licensing agreement with the Bondyne Fabrics Division of Greenwood Mills, Inc., originator of the new Dynel blends. Reeves will weave a variety of 56-inch and wider plain and fancy fabrics in the gray on its Draper and box looms. These include flannel, tropical, gabardine and worsted-effect styles for popular priced men's and boys' slacks and suitings, and women's skirts and sportswear with emphasis on traditional worsted styling.

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NATIONAL ANILINE DIVISION
Allied Chemical Corporation
Hopewell, Virginia

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To be in Europe from early May to November seeks assignments in fibers, fabrics, processes, machinery or market lines.

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Progressive New England rubber manufacturing company has opportunity for man to work on product development in Research Laboratory. Experience in synthetic fibre spinning (filament forming from solution) essential. Formal chemical education not necessary, equivalent in experience will be considered.
Reply in confidence with complete details as to education, experience and salary requirements to

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Seasoned textile school graduate seeks marketing opportunity. Background includes—Marketing, Advertising, Public Relations, Sales Management and New Product Development at staff level. Sound Chemical, Fibers Fabrics background. Record of achievements and references to support executive level position desired. Box #799.

Modern Textiles Magazine,
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Wanted commission spinning orlon or wool yarns on woolen system.

Box 803, Modern Textiles Magazine
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TEXTILE ENGINEER
for Chemical Textile Fiber Evaluation

THE CHEMSTRAND CORPORATION—manufacturer of Acrilan* acrylic fiber and Chemstrand Nylon—has immediate openings on the staff of its Acrilan manufacturing plant for an individual interested in and qualified to conduct assignments in evaluation of chemical textile fibers.
Applicants must possess a Bachelors degree, preferably in Textile Engineering, and have a minimum of 5 years experience in the synthetic fiber field involving textile processing, quality control, and/or testing and evaluation.
Chemstrand's Acrilan plant is located in Decatur, Alabama—a growing community situated in the pleasant Tennessee Valley area, which offers a diversity of recreational opportunities. Excellent schools and numerous churches are only a few of the advantages of family living in Decatur.
Employment at Chemstrand offers salaries commensurate with education and experience, liberal insurance and retirement programs and modern working facilities.
Send resume indicating academic training, experience and salary history to:

Technical Personnel Manager
THE CHEMSTRAND CORPORATION
Box A-1 **Decatur, Alabama**

Calendar of Coming Events

Mar. 9-13—Institute on Industrial Relations, sponsored by NAM. Hollywood Beach Hotel, Hollywood, Fla.
Mar. 12-13—ASME Textile Engineering Div. annual spring meeting. Clemson House, Clemson, S. C.
Mar. 16-17—ASME Lubrication Division annual spring meeting. Franklin Institute, Philadelphia, Pa.
Mar. 19-20—Southern Textile Methods and Standards Association spring meeting. Clemson House, Clemson, S. C.
Mar. 19-21—American Cotton Manufacturers Institute annual convention. Palm Beach Biltmore Hotel, Palm Beach, Fla.
Mar. 21—AATCC, South Central Section. Hotel Patten, Chattanooga, Tenn.
Mar. 23-24—Textile Research Institute annual meeting. Hotel Commodore, New York, N. Y.
Mar. 26-27—Textile Quality Control Association spring meeting. N. C. State College, Raleigh, N. C.
Mar. 27—AATCC, Hudson-Mohawk Section. Chelsea House, Tribes Hill, N. Y.
Apr. 1—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
Apr. 2-3—Textile Subcommittee of American Institute of Electrical Engineers annual conference. Heart of Atlanta Motel, Atlanta, Ga.
Apr. 9-11—Alabama Textile Manufacturers Association annual convention. Hotel Buena Vista, Biloxi, Miss.
Apr. 10-11—AATCC, Piedmont Section. Robert E. Lee Hotel, Winston-Salem, N. C.
Apr. 13-17—National Packaging Exposition, sponsored by American Management Association. International Amphitheater, Chicago, Ill.
Apr. 15-16—ACMI Cotton Fiber Testing Laboratory's open house. Clemson House, Clemson, S. C.
Apr. 15-16—National Knitted Outerwear Association annual meeting. Waldorf-Astoria Hotel, New York, N. Y.
Apr. 22-25—Cotton Manufacturers Association of Georgia annual meeting. Diplomat Hotel, Hollywood Beach, Fla.
Apr. 28-29—Institute Textile Technology meeting of Technical Advisory Committee and Board of Trustees. Charlottesville, Va.
Apr. 29-30—The Fiber Society, Inc. spring meeting. Fontana Village, N. C.
May 2—Alabama Textile Operating Executives spring general meeting on slashing and weaving problems. Thach Auditorium, Auburn, Ala.
May 4—Nat'l Association Hosiery Manufacturers annual meeting. Claridge Hotel, Atlantic City, N. J.
May 4-8—Knitting Arts Exhibition. The Auditorium, Atlantic City, N. J.
May 5—93rd annual meeting Underwear Institute. Hotel Traymore, Atlantic City, N. J.
May 6—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
May 8-13—Tufted Textile Manufacturers annual convention. Cruise from Savannah, Ga. to Nassau.
May 12-14—Cotton Research Clinic. Grove Park Inn, Asheville, N. C.
May 12-16—Textile Institute annual conference. Scarborough, England.
May 18-23—National Cotton Week.
May 25-27—American Society for Quality Control convention. Public Hall, Cleveland, Ohio.
Jun. 3—AATT monthly meeting. Della Robbia Room, Hotel Vanderbilt, New York, N. Y.
Jun. 9-12—Material Handling Institute's Exposition. Public Auditorium, Cleveland, Ohio.
Jun. 18-20—Southern Textile Association annual convention. Ocean Forest Hotel, Myrtle Beach, S. C.
Sep. 10-11—Fiber Society Inc. meeting. Princeton, N. J.
Sep. 12-21—3rd International Textile Exposition. Milan, Italy.
Sep. 17-18—Chattanooga Yarn Association annual outing. Chattanooga, Tenn.
Sep. 28-29—American Gas Association textile processing symposium. Sedgefield Inn, Greensboro, N. C.

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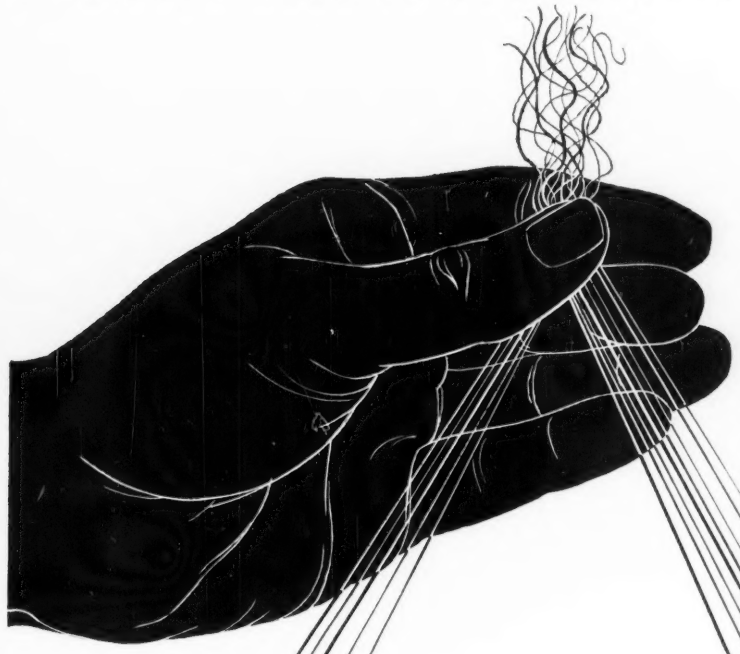

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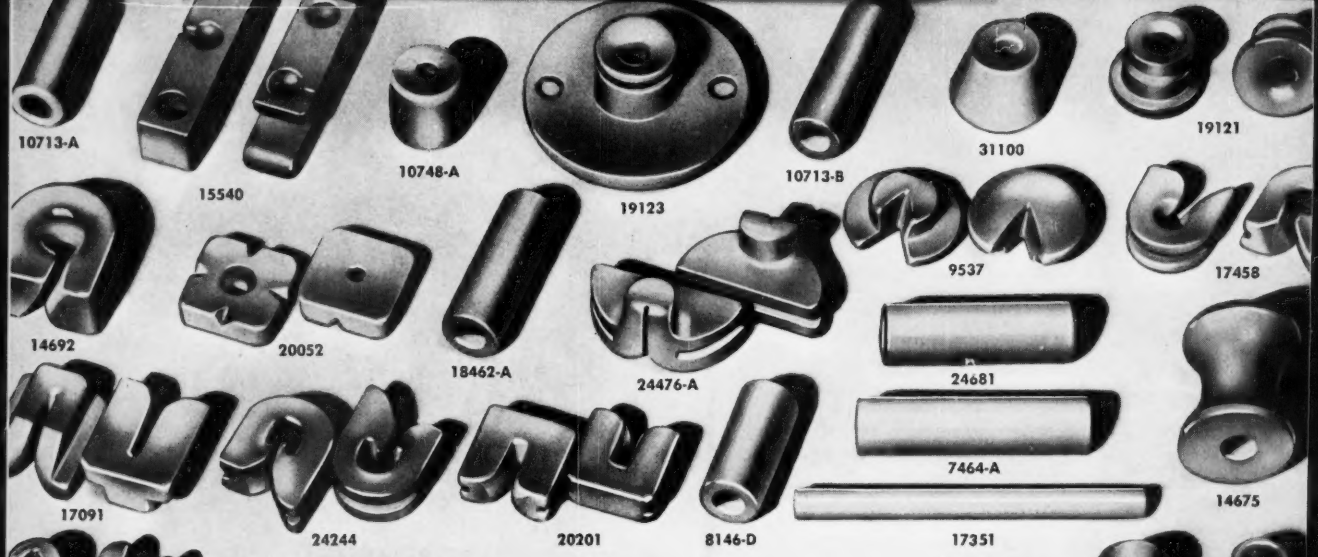

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